

DOCUMENT RESUME

ED 296 094

CE 050 291

TITLE Exploring Photography. The Illinois Plan for Industrial Education.

INSTITUTION Illinois State Univ., Normal.

SPONS AGENCY Illinois State Board of Education, Springfield. Dept. of Adult, Vocational and Technical Education.

PUB DATE 87

NOTE 79p.; For related documents, see CE 050 288-298.

AVAILABLE FROM Curriculum Publications Clearinghouse, Horrabin Hall 46, Western Illinois University, Macomb, IL 61455.

PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.

DESCRIPTORS Behavioral Objectives; Equipment Utilization; *Industrial Education; *Industry; Junior High Schools; Learning Activities; Lesson Plans; Middle Schools; *Photographic Equipment; *Photography; *Production Techniques; Statewide Planning; Technical Education; *Technological Literacy; Technology

ABSTRACT

This guide, which is one in the "Exploration" series of curriculum guides intended to assist junior high and middle school industrial educators in helping their students explore diverse industrial situations and technologies used in industry, deals with exploring photography. The following topics are covered in the individual lessons: introduction to photography, photography applications (the advantages and applications of photography and steps in planning a training presentation), techniques for photographing a subject, steps in processing photographs (developing print, slide, and instant films and preparing a presentation), and procedures for presenting a subject and making a presentation. The guide includes the rationale behind its development, hints to the teacher, lesson plans, student handout masters, teacher aids, a unit examination, and a list of references. The lesson plans include cross-referenced lists of objectives, lesson content, and learning activities. (MN)

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EXPLORING PHOTOGRAPHY

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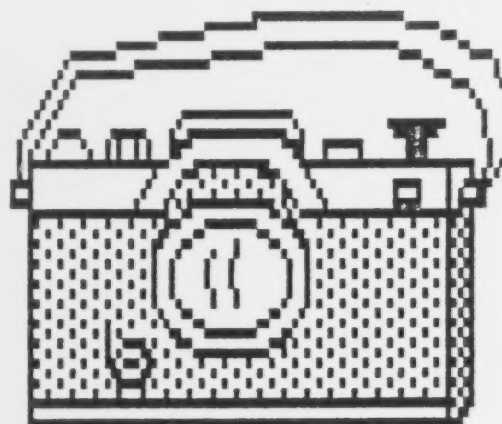
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PACKET INCLUDES:

Rationale
Hints to the Teacher
Lesson Plans
Student Handout Masters
Teacher Aides
Unit Examination
References



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ILLINOIS PLAN FOR INDUSTRIAL EDUCATION

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INTRODUCTION

Exploring Photography" is one of a series of curriculum materials developed for junior high and middle school industrial educators. Listed below are the titles of the units in the series.

Communication

- Using the Language of Industry
- Exploring Computer Technology
- Exploring Photography
- Exploring Graphic Communication
- Exploring Electronic Communication

Energy Utilization

- Exploring Solar Energy
- Using Alternate Energy Sources
- Conserving Energy Sources
- Exploring Electricity/Electronics
- Exploring Mechanical and Fluid Systems

Impact of Industry and Technology

- Recycling Materials
- Limiting Pollution
- Exploring Careers in Industry
and Technology
- Exploring Technology and the Future

Production

- Exploring Materials and Processes
- Exploring Construction Technology
- Research and Development
- Exploring Manufactured Systems
- Servicing Products

Transportation

- Exploring Land Transportation
Systems
- Exploring Aviation Technology
- Exploring Water Transportation
Systems
- Exploring Space Transportation
Systems
- Exploring Materials Handling
Systems

With the Exploration Series, industrial educators can lead their 7th and 8th grade students in exploring many industrial situations and technologies used in industry. In addition, this series can serve as a resource for teachers orienting 9th and 10th grade students to industrial technologies in communication, production, energy utilization and transportation. Each unit in the series includes a rationale, hints to the teacher, a sample daily schedule, lesson plans, student handouts, teacher aids, a unit examination, and a list of references.

"Exploring Photography" and other units in the series are available on a cost recovery basis through the Curriculum Publications Clearinghouse, Western Illinois University, Horrabin Hall 46, Macomb, IL 61455.

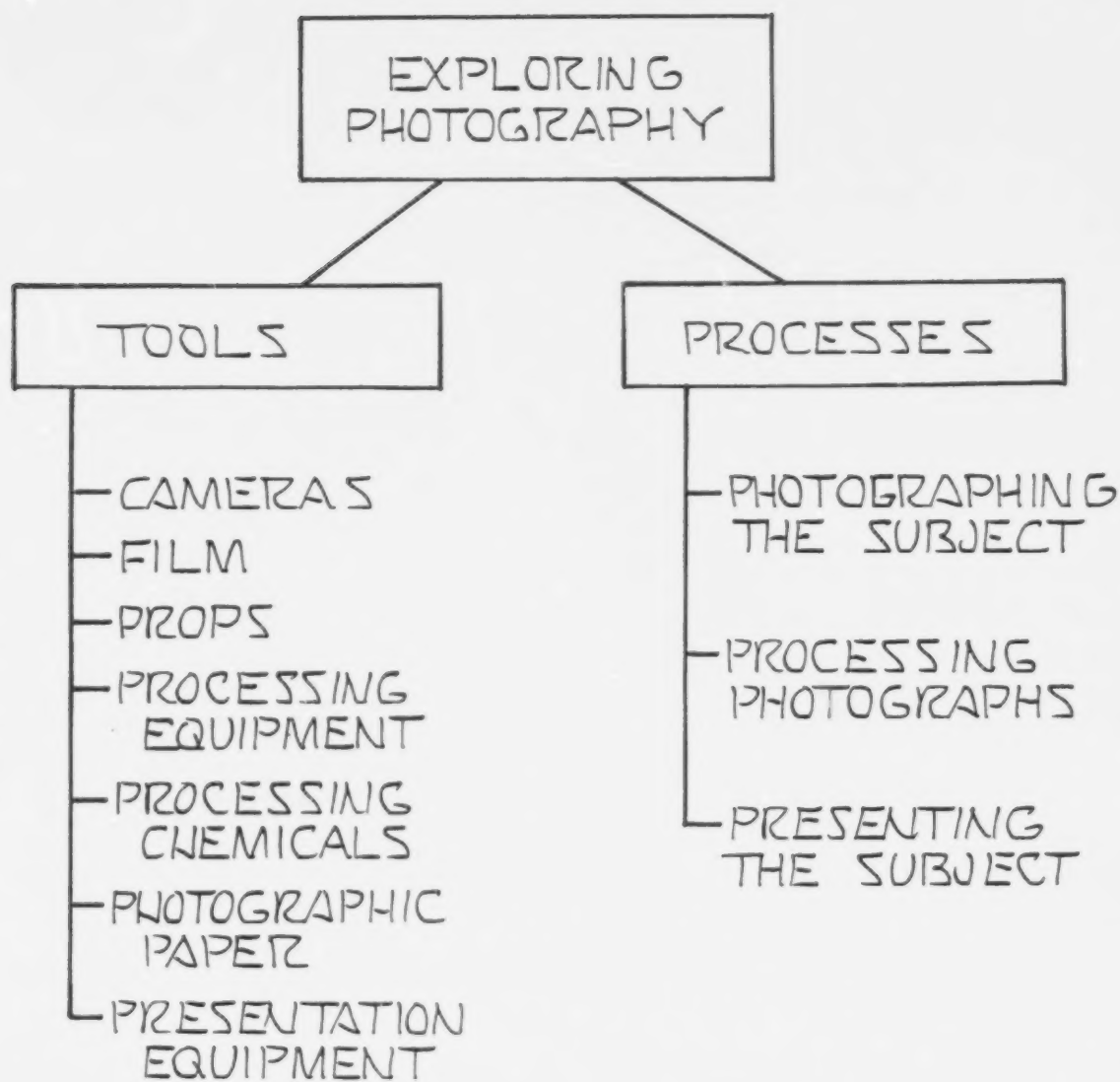
The development of this publication was made possible through grants from the Illinois State Board of Education, Department of Adult, Vocational and Technical Education, Research and Development Section, 100 North First Street, Springfield, Illinois 62777. Opinions expressed in this document do not reflect, nor should they be construed as, policy of the State Board of Education or its staff.

EXPLORING PHOTOGRAPHY

Rationale

As the old saying goes, "a picture is worth a thousand words." Technological developments have made photography one of the most commonly used and powerful communication tools available to humankind. Everyday, we are bombarded with photographs designed to persuade, inform, educate, and entertain us. In the world of work, photography is commonly used to describe how something looks, record information, and provide observable data that can be studied and analyzed. Given the communication value of photography, it is important that all students develop a basic understanding of photography concepts and applications.

During this unit, students will explore the basic photographic tools, techniques, and materials used to process, transmit, and receive information. During the lab activities, students will apply a variety of photography concepts to design, photograph, and present a subject. These concepts will complement further studies in areas like communications, journalism, marketing, and art.



EXPLORING PHOTOGRAPHY

Hints to the Teacher

1. To minimize the cost of implementing this unit, emphasis has been placed on designing, photographing, and presenting a subject. Since most people, and many professional photographers, rely heavily on commercial labs to process their film, processes like developing film, handling chemicals, making contact sheets, making enlargements, and developing prints have been omitted. However, if you have access to a dark room and film processing equipment, these concepts can be integrated into the unit.
2. To implement this unit, you will need at least one camera for every three students in your largest class. These cameras need not be expensive or sophisticated. In fact, many of the most sophisticated cameras on the market today are designed to be as easy to use as an instamatic camera. For the purposes of this unit, a 35 mm instamatic camera that costs between \$10.00 and \$20.00 is more than adequate. Other possibilities include disc cameras, 110 instamatic cameras, Polaroid Land cameras, or even 35 mm disposable cameras.
3. During this unit, your students will make a photographic presentation describing how to perform a given task. Depending on the type of film you use, these presentations can be in the form of a story board or a slide presentation. The script for these presentations can be recorded on and dictated from 3" x 5" cards. A second option would be to have students record their scripts on a cassette tape. The tape would need to include cues (recorded tones) that signal when to advance to the next slide.
4. Another possible photography project would be to have students make manuals that describe how to perform given tasks. These manuals would feature photographs and captions describing a step-by-step process for completing the task. After the manuals have been evaluated, they could be used to support other learning activities. For example, a manual describing how to change a spark plug in a small engine could be used during a servicing activity.
5. The purpose of this unit is to present photography as an important and powerful communication tool. Therefore, it is important that your students' photography projects be thoroughly planned. They should have specific communication goals in mind before they take pictures. Discourage your students from taking snapshots.

6. During this unit, you will need to show your students various examples of film, cameras, photographs, and photographic presentations. You may want to ask local photographers and photography stores to help you collect these examples.
7. Prior to implementing this lesson, you may want to use the example story board provided to make your own photographic presentation. Your presentation could be in the form of a story board or a slide presentation. Making your own presentation will enable you to anticipate problems and develop strategies to ensure student success.
8. This unit represents an excellent opportunity to promote technology education in your school community. Ask a guest speaker to visit your class and talk about photography. Invite parents, administrators, the press, and fellow educators to your students' photographic presentations. Enter your students' photography projects in a local, state, or national project fair or competition.

EXPLORING INDUSTRY AND ITS TECHNOLOGIES

Unit: Exploring Photography

Lesson 1: Introduction to Photography

<u>Objectives</u>	<u>Lesson Content</u>	<u>Learning Activities</u>	<u>Ref.</u>
A. Following a discussion, students will be able to: -identify a definition for photography. -identify three advantages of photography. -identify five basic applications for photography.	A. Introduction to Photography 1. Photography is storing information on a light sensitive material. 2. Advantages of photography a. accuracy b. speed c. communication value 3. Applications for photography a. communication b. image processing c. record keeping d. research e. artistic expression	A. Teacher Guided Discussion 1. Ask students why they think many people feel "a picture is worth a thousand words." 2. Using OT #1-1, discuss a definition for photography. 3. Using OT #1-2, discuss the advantages of photography as a means of communication. 4. Using OT #1-3, discuss the five basic applications for photography.	

B. Following a demonstration, in a lab activity, students will be able to:

- select a topic for their training presentation.
- develop a story board describing the content and visuals for their training presentation.

B. Planning a training presentation.

1. selecting a topic
2. identifying the content
3. planning the script
4. planning the visuals

B. Learning Activity

1. Introduce students to the concept of making photographic presentation.
2. Provide each student HO #1-1
3. Discuss each of the possible topics for presentations. Explain how students can propose a topic not listed on the lab sheet.
4. Explain how to identify the content for their training presentation.
5. Using the example story board provided, explain how to develop a script for the presentation.
6. Using the example story board provided, explain how to plan the visuals for presentations.
7. Divide the class into groups of three to four students.
8. Have each group develop a story board for their presentation.
9. Circulate around the room and provide individual instruction as needed.
10. Before the end of the period, provide each team feedback regarding their story boards. Collect and evaluate each teams story board.

INTRODUCTION TO PHOTOGRAPHY

Preparation Hints:

1. Review the materials provided, duplicate HO #1-1, and prepare the transparencies needed to present this lesson.
2. During the lab activity, your students will be developing story boards for their training presentations. Prior to implementing this lesson, review the possible presentation topics listed on HO #1-1. These topics are merely examples of what students could address in a training presentation. To tailor this learning activity to your students and facilities, you may to delete and/or add topics to the list.
3. To help students develop story boards, you may want to provide some of the props needed to address each topic. For example, having access to a socket wrench, spark plug socket, wire gauge, spark plugs, and a small engine could help students develop a story board describing how to change a spark plug.

Content Presentation Hints:

1. At the start of this lesson, consider taking several pictures of your class with an instant camera. While circulating around the room, give the prints to members of your class and ask them to pass them around. Use this introductory experience to define photography, describe the advantages of photography, and identify applications for photography.
2. Consider showing students a variety of photographs describing various applications for photography. Your examples could include pictures in newspapers, brochures, quarterly reports, science books, training manuals, art books, and public relations materials. In addition, try to show your students examples of infrared photography, microfiche, and if possible, x-rays.

Learning Activity Hints:

1. When demonstrating how to plan a photographic presentation, consider developing an example story board on the chalk board. Divide one of the topics listed on HO #1-1 into a series of steps. Use the story board panels to develop a script for a presentation. When the

script is complete, draw sketches describing the visuals for each presentation step. You do not need to complete every panel of your example story board. However, your demonstration should include developing the introduction panel, several presentation panels, and a closing credit panel.

2. Encourage students to keep their scripts simple. Emphasize the importance of having an introduction, series of steps, closing credits, and strong visuals. Make sure students understand that they do not have to fill all twelve panels of the story board. They only need to use as many panels as it takes to describe their topic. However, you may want to make sure that students do not develop their story board beyond twelve panels unless you plan to use film with more than twelve exposures. To help you prepare for the next lesson, ask students to list the props they will need for this photography project.

OT #1-1

PHOTOGRAPHY is storing information on a light sensitive material.

OT #1-2

ADVANTAGES OF PHOTOGRAPHY:

- * accuracy**
- * speed**
- * communication value**

OT #1-3

APPLICATIONS FOR PHOTOGRAPHY:

- * communication**
- * image processing**
- * record keeping**
- * research**
- * artistic expression**

INTRODUCTION TO PHOTOGRAPHY

Discussion:

Like the old saying goes, "a picture is worth a thousand words." We live in a world full of pictures. Many of the pictures we see around us were made with the aid of photography. Photography is storing information on a light sensitive material. It can be used to accurately record and communicate a lot of information in a short period of time. It is a tool that can be used for communication, image processing, record keeping, research, and artistic expression.

Photography allows us to capture a moment in time in the form of a picture. The picture itself is the direct result of light bouncing off a subject and striking a light sensitive material. Therefore, photography can be defined as storing information on a light sensitive material.

Photography has several advantages over other forms of communication. A photograph can accurately record a lot of information in a fraction of a second. For the most part, photographs tell the truth. However, they can be altered and photographers can leave important information out of the photographs. Since it uses pictures, photography is a universal language that can overcome many communication barriers.

Photography is a tool that can be used for a variety of applications. These applications include:

- * communication
- * image processing
- * record keeping
- * research
- * artistic expression

As a communication tool, photography can be used to transmit information from one person to another. The person sending the message can be anyone, a manufacturer, a salesperson, a teacher, or a journalist. Automobile manufacturers use photography to show people what their new cars look like. Salespeople use photographs and slides to make sales presentations to prospective customers. Educators use photographs, slides, and films to present new information to their students. And, journalists use photographs to tell us about the latest events.

Photography is often used to process images during manufacturing processes. Graphic arts companies use photography to make printing plates for lithography (offset) printing presses. Electronic component manufacturers use photography to make circuit boards and integrated circuits.

Photography can be used to store information. The information on a sheet of paper can be reduced to an image about 1/4 of an inch using microfilm technology. Hundreds of pages can be stored on a single microfilm card called microfiche. Libraries often store old newspapers, magazines, and other documents on microfiche. Large companies and government agencies often store their records on microfiche.

Information can also be stored in the form of photographs. Police departments use photographs to document crime scenes and accidents. Race officials capture the moment the winner crosses the finish line on film in the event of a tie.

As a research tool, photography can often be used to see things that are not visible to the human eye. For example, x-rays use energy to record information on a special type of film. X-ray technology allows physicians, scientists, and engineers to see inside solid objects. For example, when nuclear reactors are being constructed, important joints are often x-rayed to identify welding defects. Doctors use x-rays to diagnose health problems.

Infrared photography records information that is in the form of heat. Energy auditors use infrared photography to measure heat escaping from buildings. Safety inspectors use infrared photographs to measure the pollution being emitted into the environment from smoke stacks. Geologists use infrared satellite pictures find oil deposits.

Photography can be used to study motion. Scientists use high speed photography to study a variety of moving subjects. These subjects could include a bird in flight, a bullet striking a material, or an athlete throwing a baseball. Efficiency experts use photography during time and motion studies to analyze the movement of people and materials in a manufacturing plant. Engineers use photography to study how an automobile design absorbs energy during a collision.

Artists use photography to express their ideas. By photographing objects and events in creative ways, the photographer/artist can make an artistic statement. Through the use of lighting, color, and composition, the artist can enhance the beauty or mood of a subject.

Learning Activity:

Industry uses photography to make sales, training, and public relation presentations. The purpose of a sales presentation is to convince a possible customer to purchase a product. Public relations presentations provide information about an organization. Training presentations are designed to teach employees how to perform a task or how something works. During the following lab activity, your group will be planning a training presentation.

1. The first step in planning your presentation is to select a topic for your photography project. Discuss options listed below and circle the topic your group would like to use for your photography project. If your group identifies a topic that is not on the list, write it in the blank next to "other." Ask your teacher to approve the new topic before you go on to step number 2.

Our group will develop a photographic presentation describing how to:

- * build a model rocket.
 - * fix a flat tire on a bicycle.
 - * change the spark plug on a small engine.
 - * load film into a camera.
 - * use the school video recorder.
 - * format a computer diskette.
 - * use the drill press.
 - * make a paper airplane.
 - * silk screen an image onto a T-shirt.
 - * make a pinhole camera.
 - * use a product your class manufactured.
 - * boot a diskette in a computer.
 - * mold expandable polystyrene beads.
 - * make a plastic coin holder with plastisol.
 - * make a coin or citrus cell.
 - * make a solar hotdog cooker.
 - * use pop rivets.
 - * make a plexiglass picture frame.
 - * other
-

2. Once you have selected a topic, you need to identify the content for a photography project. List the basic steps for your how-to-do-it process in the spaces provided below.

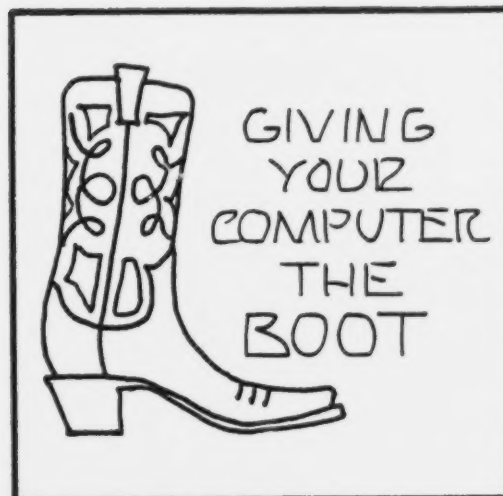
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

3. The next step is to develop a story board for your photographic presentation. A story board provides a plan for taking photographs. Professional photographers take photographs to communicate specific information. Before you can take photographs, you need to know what you want to communicate. Using the steps listed above, develop a script for your presentation. Your script should include a title, an introduction, the steps listed above, and a closing credit (see the example story board). Write your script in the spaces provided on your story board.

4. Lastly, you need to plan the photographs you will be taking to compliment your script. Review your script and decide what should be photographed to communicate each idea. Draw a sketch of what you want to be in each photograph in the boxes next to your script (see the example story board). Try to use a variety of pictures to communicate your ideas. For example, include pictures of people as well as objects. Include close-ups as well as photographs taken at a distance. Lastly, photograph text for your introductor title and closing credit.

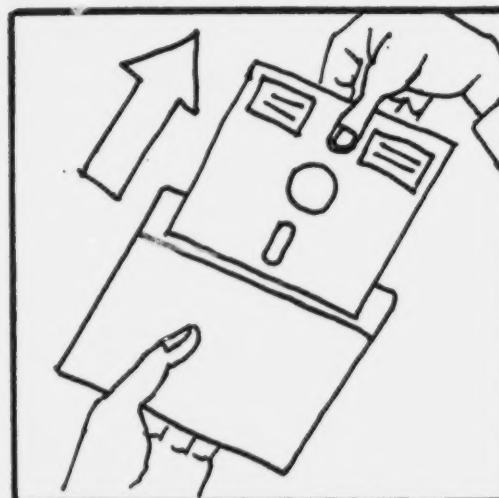
INTRODUCTION

GIVING YOUR
COMPUTER THE
BOOT



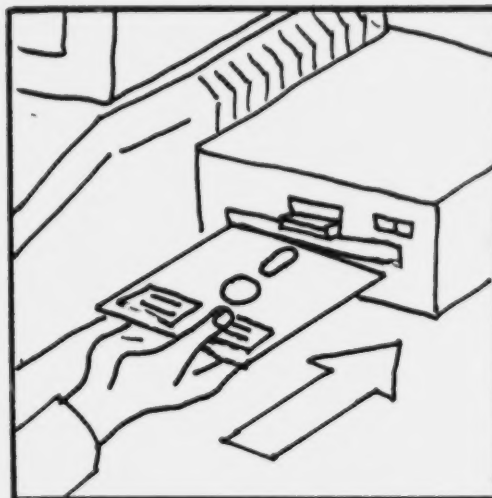
STEP 1

REMOVE THE
PROGRAM DISK
FROM ITS
PROTECTIVE
ENVELOPE.



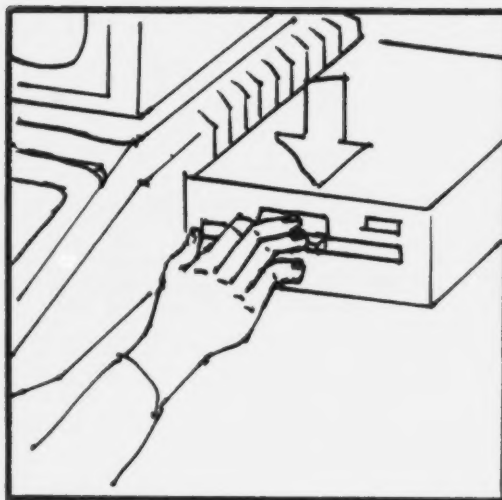
STEP 2

OPEN THE DISK
DRIVE DOOR.
HOLD THE DISK
WITH THE LABEL
FACE-UP. INSERT
THE DISK INTO
THE DISK DRIVE.



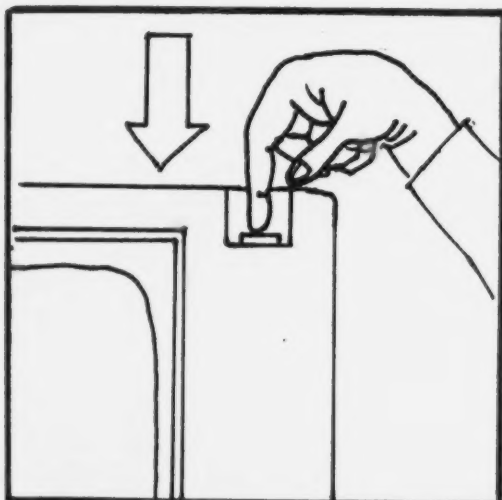
STEP 3

CLOSE THE
DISK DRIVE
DOOR.



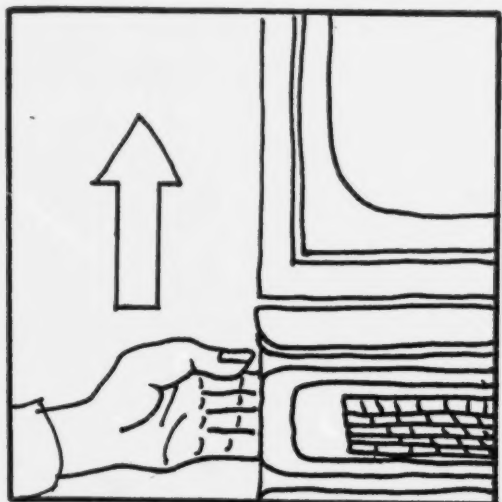
STEP 4

TURN THE
MONITOR
ON.



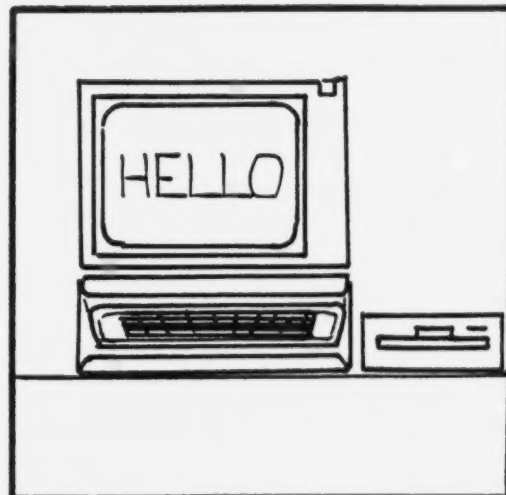
STEP 5

REACH AROUND
THE LEFT REAR
CORNER OF THE
THE COMPUTER
AND PUSH THE
TOP HALF OF
THE ROCKER
SWITCH.



STEP 6

AFTER YOU HAVE
TURNED ON THE
COMPUTER, THE
DISK DRIVE LIGHT
WILL LIGHT.
WATCH THE
MONITOR AND
WAIT FOR THE
HELLO MESSAGE.



STEP 7

WHEN THE DISK
DRIVE STOPS,
YOU CAN START
COMPUTING.
FOLLOW THE
INSTRUCTIONS
DISPLAYED ON
THE SCREEN.



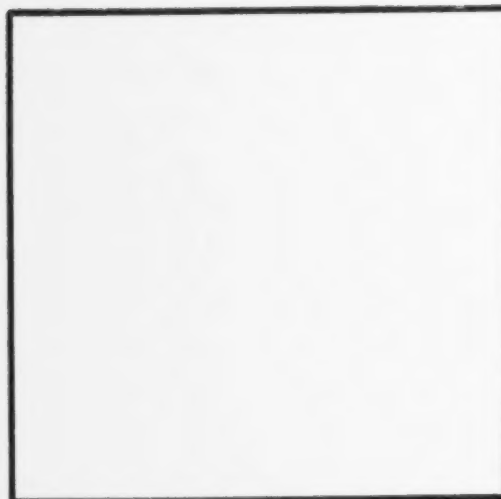
CLOSING CREDITS

THIS HAS BEEN
A PHOTOCOMMA
PRODUCTION. PHOTO-
GRAPHY AND AUDIO
BY:

TOM SMITH
KIM BROWN
MIKE JONES

A PHOTOCOMMA
PRODUCTION
PHOTOGRAPHY
AND
AUDIO BY:
TOM SMITH
KIM BROWN
MIKE JONES

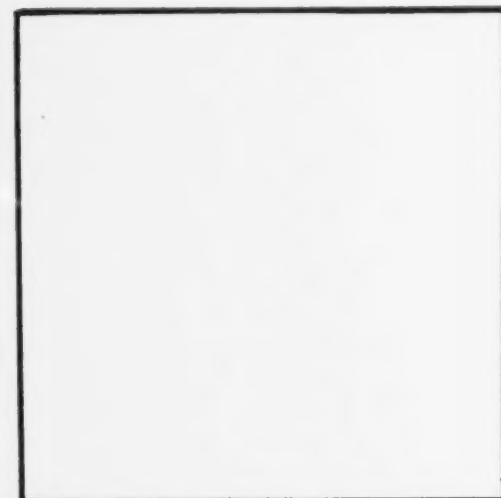
INTRODUCTION



STEP ONE



STEP TWO



STEP THREE

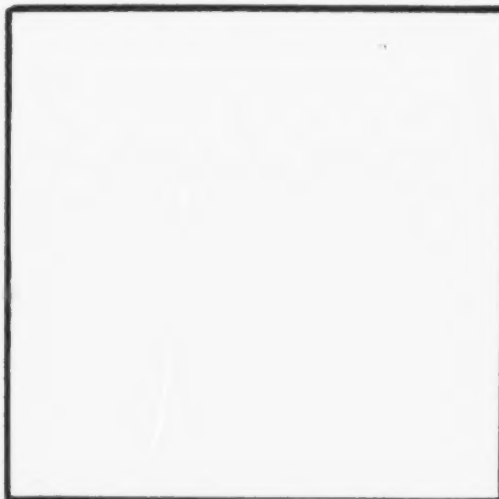
STEP FOUR

STEP FIVE

STEP SIX



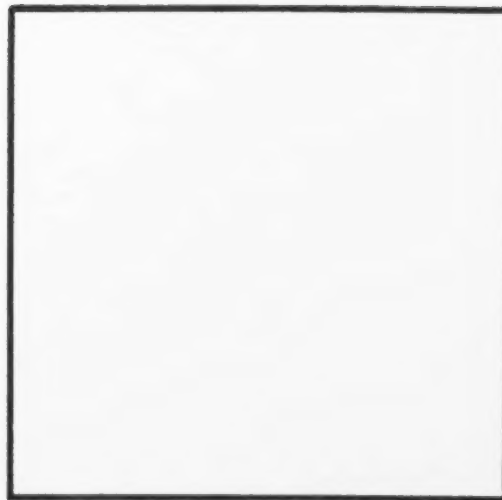
STEP SEVEN



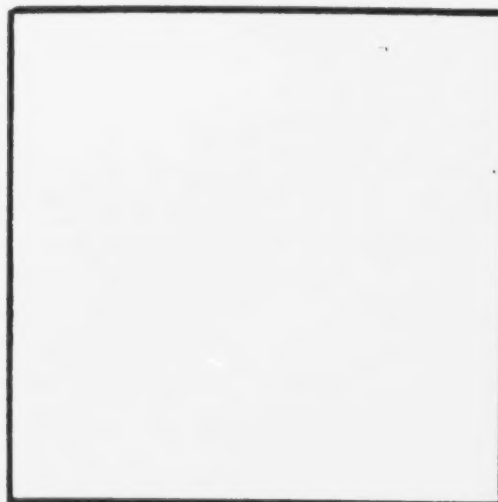
STEP EIGHT



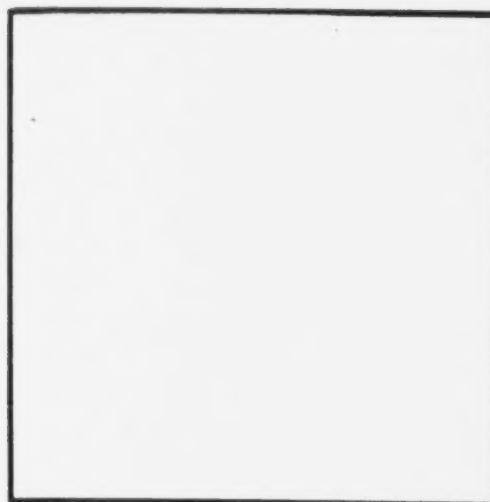
STEP NINE



STEP TEN



CLOSING CREDITS



EXPLORING INDUSTRY AND ITS TECHNOLOGIES

Unit: Exploring Photography

Lesson 2: Photographing the Subject

<u>Objectives</u>	<u>Lesson Content</u>	<u>Learning Activities</u>	<u>Ref.</u>
A. Following a discussion, students will be able to: -list the six basic elements of a camera. -identify the role of each basic element in the photographic process. -list the four basic types of cameras. -identify the characteristics of the four basic types of cameras. -list the four basic types of film. -identify the characteristics of each basic type of film.	A. Photographing the subject 1. Basic elements of a camera a. body b. film c. aperture d. shutter e. viewing system f. lens 2. Basic types of cameras a. instant cameras b. self developing cameras c. adjustable cameras d. automatic cameras 3. Basic elements of film a. emulsion layer b. base c. antihalation layer 4. Basic types of film a. print b. slide c. instant d. infrared	A. Teacher Guided Discussion 1. Show students two or more cameras. Ask them to identify their common elements. 2. Using OT #2-1, discuss the six basic elements needed to record information on a light sensitive material. 3. Using OT #2-2, discuss the four basic types of cameras. Describe the advantages and disadvantages of each type of camera. 4. Using OT #2-3, discuss the three basic elements used to make film. 5. Using OT #2-4, discuss the four basic types of film. Describe the advantages and disadvantages of each type of film.	

- B. Following a discussion, in a lab activity, students will be able to:
- load film into their assigned camera.
 - adjust the exposure on their assigned camera.
 - arrange people and props to communicate specific information.
 - use the rule of thirds to compose their photographs.
 - accurately photograph their subject with their assigned camera.
 - safely remove and store their exposed film.

- B. Photographing the subject
1. Preparing the camera
 - a. loading the film
 - b. setting the ASA
 - c. advancing the film
 2. Designing the subject
 - a. analyzing a story board
 - b. arranging people and props
 - c. lighting the subject
 3. Composing the photograph
 - a. identifying the center of interest
 - b. using the rule of thirds
 4. Setting the exposure (if necessary)
 - a. setting the shutter speed
 - b. setting the F-stop
 5. Taking photographs
 - a. holding the camera
 - b. activating the shutter
 6. Removing and storing film
 - a. rewinding the film (if necessary)
 - b. removing the film canister
 - c. storing the exposed film

- B. Learning Activities
1. Demonstrate how to handle a camera. Explain how to load film, set the ASA, and advance the film on a school camera.
 2. Using an example story board, demonstrate how to arrange people and props to communicate a specific idea.
 3. Explain how to identify the center of interest and use the rule of thirds to compose a picture.
 4. Explain how to set the shutter speed and F-stop on a school camera.
 5. Demonstrate how to hold a camera horizontally and vertically. Explain how to activate the shutter and advance the film.
 6. Demonstrate how to properly rewind, remove, and store exposed film.
 7. Provide each student with HO #2-1, have students get into their groups, and return their story boards.

8. Have each group begin photographing their subject.
9. Circulate around the room and provide individual instruction as needed.
10. When students have finished photographing their subject, collect their exposed film for processing.

PHOTOGRAPHING THE SUBJECT

Preparation Hints:

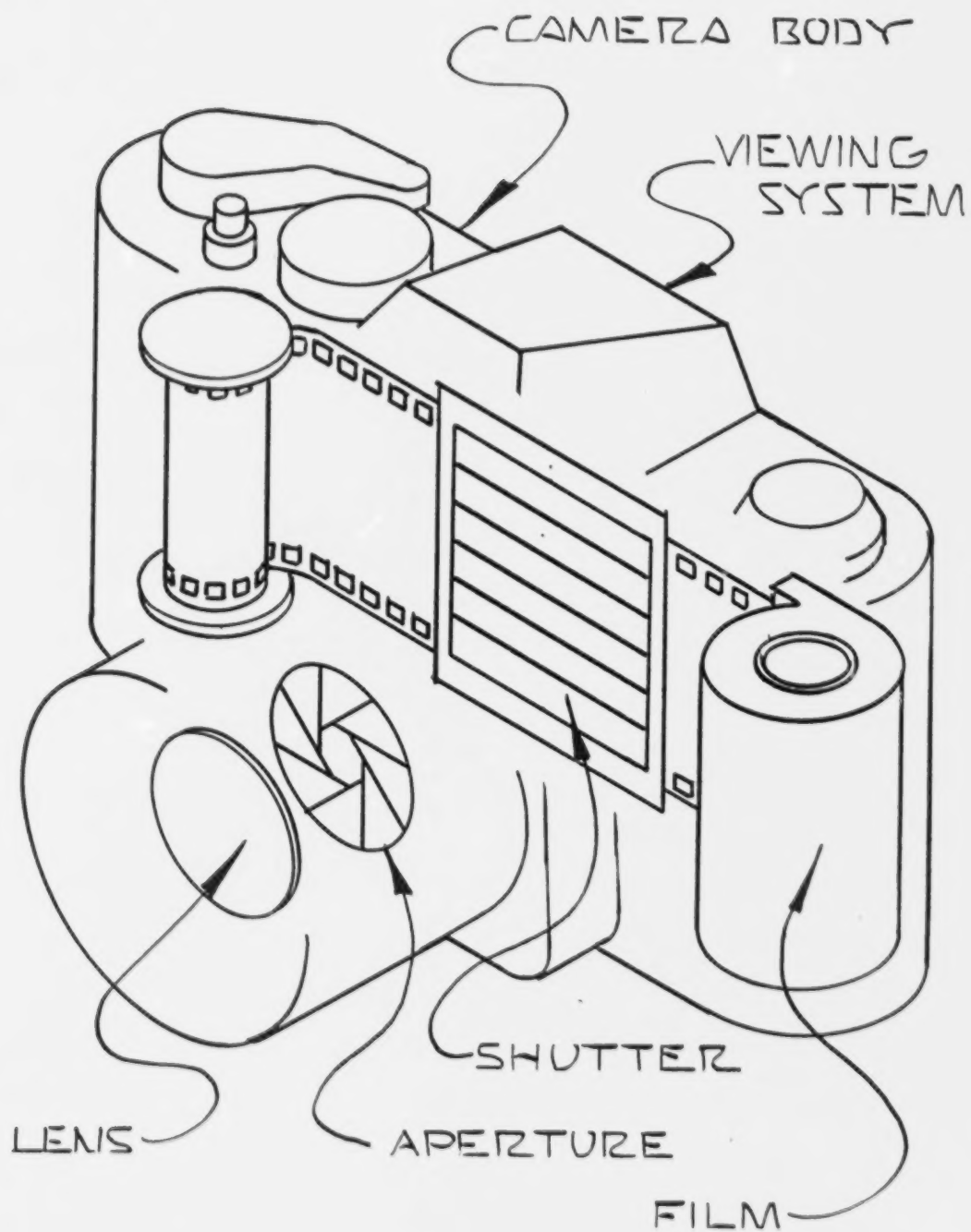
1. Review the materials provided, duplicate HO #2-1, and prepare the transparencies needed to present this lesson.
2. During the lab activity, students will be taking photographs for their training presentations. These photographs can be taken with disc, 110 instamatic, land, or 35mm cameras. To ensure student success, provide students with easy-to-use cameras. Avoid using cameras that require students to make a lot of adjustments.
3. Prior to implementing this lesson, you will need to purchase film for the lab activity. To minimize the need for additional lighting, consider using film with an ASA rating of 400 or above. If you are using 110 or 35 mm cameras, you could purchase either print or slide film. Print film can typically be processed within 24 hours. Some labs offer a one hour film processing service. Unfortunately, slide film typically takes several days to be processed. However, slide presentations look more professional than print presentations. Provide each group with enough film so they can take at least two pictures for each panel in their story board. If students are only allowed to take one photograph per panel, one mistake could ruin their whole photography project.
4. During the lab activity, your students will need a variety of props to communicate their topics. Prior to implementing this lesson, ask students to collect and organize the props they will be using to create their photographic presentations.
5. During a lab activity, your students will need to photograph text for their introductions and closing credits. Each team will need large sheets of colored paper and a broad tip magic marker. Avoid using brightly colored paper. If you have a light green chalk board in your laboratory, your students can use it and colored chalk to create text for their introduction and closing credits.

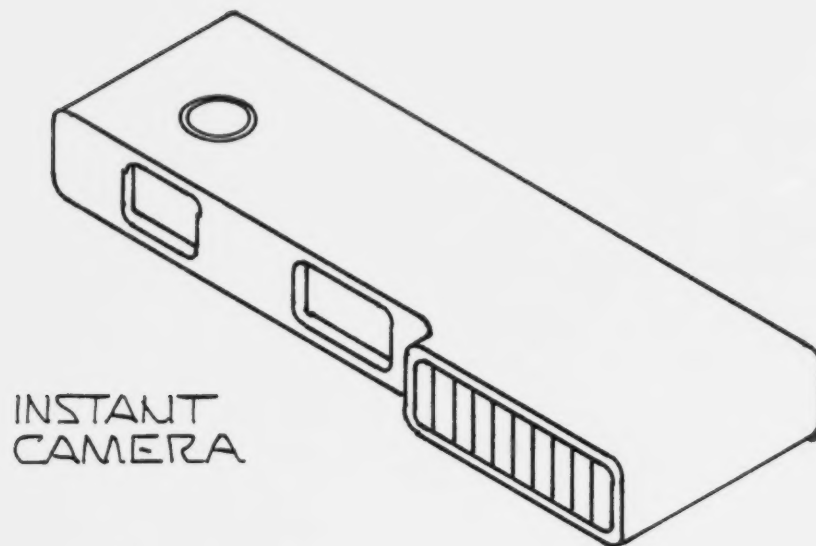
Content Presentation Hints:

1. Show students a variety of cameras. Your examples could include a pin hole, disc, instamatic, land, and 35mm cameras. When introducing the basic elements of a camera, ask students to identify the common elements among the various types of cameras displayed.
2. Open the back of a 110 or a 35mm camera and place it on an overhead projector with the lens facing down. This should produce a silhouette of the camera on the projector screen. You can show students how the aperture and the shutter work together to expose film by pushing the button on the camera. A flash of light should appear in the center of the silhouette on the screen.
3. Consider showing a film or video tape on photography.
4. Show students a variety of pictures taken with various types of film. Among your examples, include black and white prints, color prints, enlargements, instant prints, slides, and if possible, infrared prints.

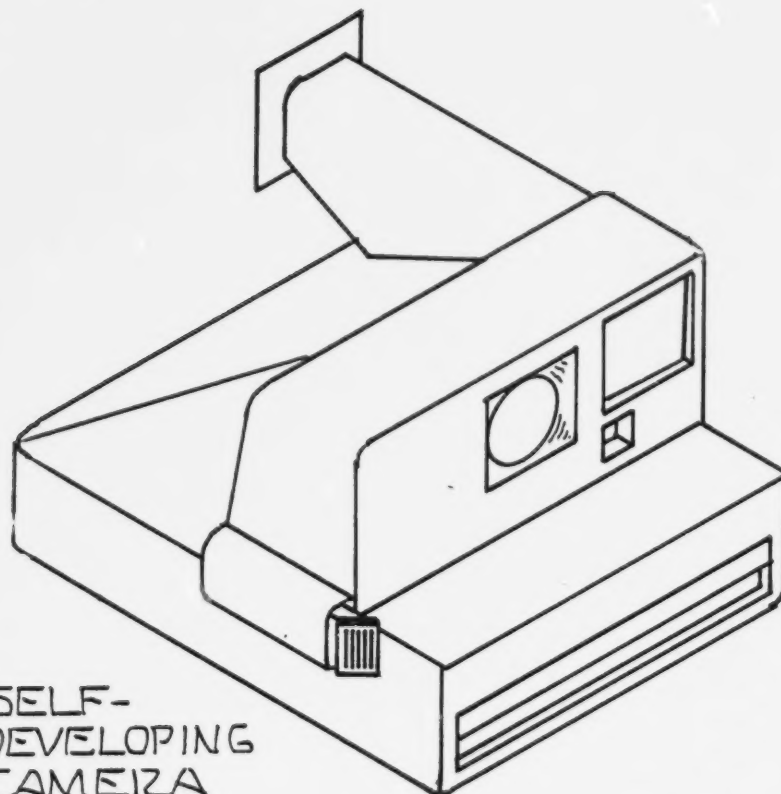
Learning Activity Hints:

1. Consider using an instant camera to show students how to photograph a subject. Using an example story board as a guide, arrange a variety of students and/or props to communicate an idea. Ask students to identify the center of interest in the scene. Take a variety of photographs using good and bad composition techniques. Pass the photographs around the class and ask students to identify the photograph that communicates the idea best.
2. Show students a variety of photographs. Ask them to identify the center of interest in each photograph. Lastly, ask students to identify the photographs that follow the rule of thirds.
3. If you are using cameras that require students to set the shutter speed and the F-stop, consider using an 18% gray card to check their exposure settings before they photograph their subject.
4. If you are using expensive cameras, consider mounting them on tripods. This will minimize the chances of them being dropped or damaged.

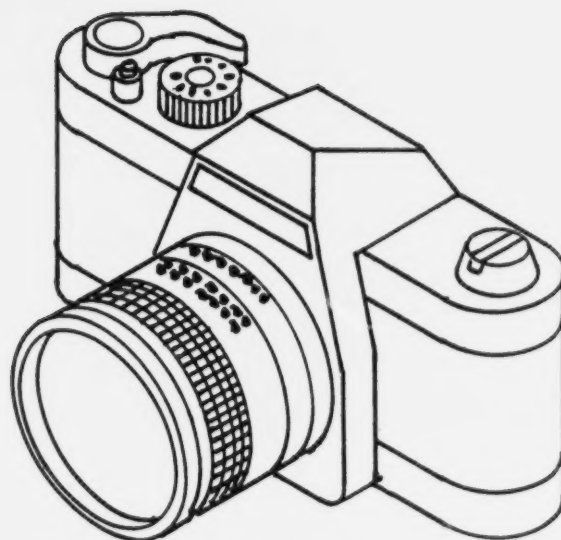




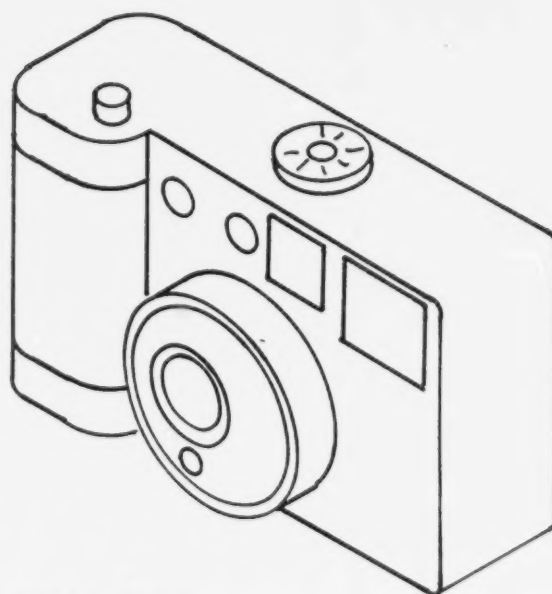
INSTANT
CAMERA



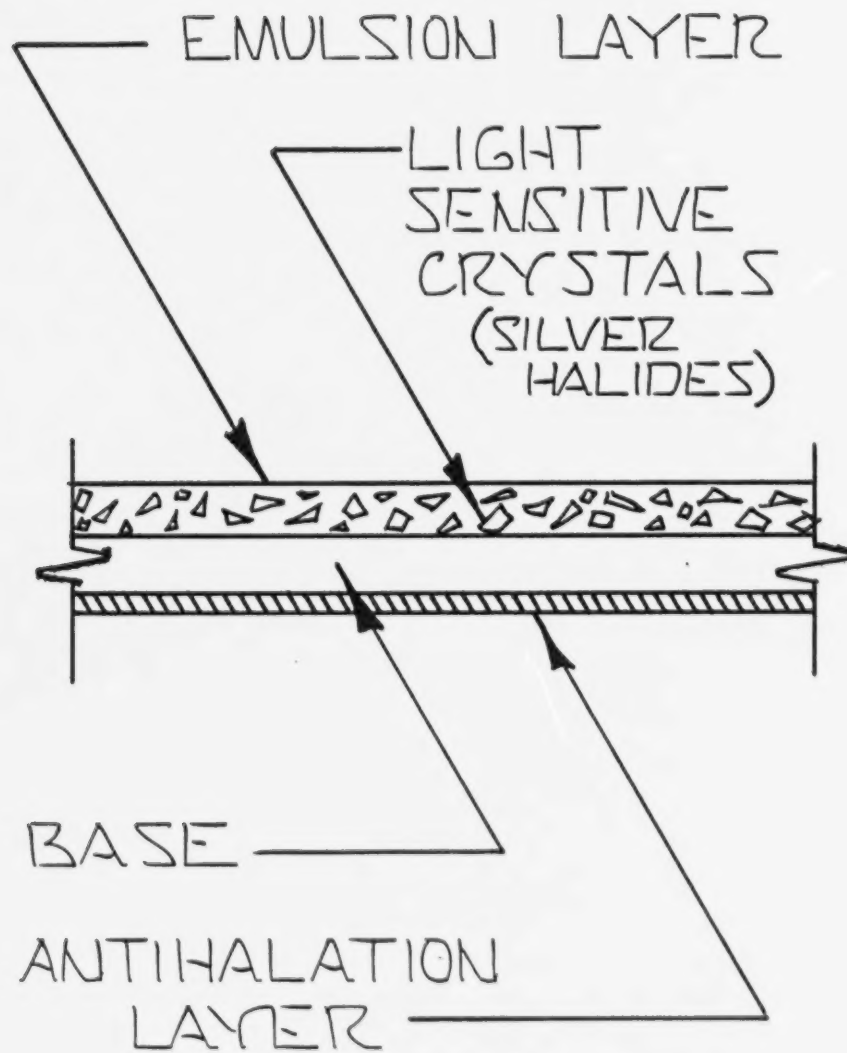
SELF-
DEVELOPING
CAMERA



ADJUSTABLE CAMERA



AUTOMATIC CAMERA



OT #2-4

BASIC TYPES OF FILM:

- * print
- * slide
- * instant
- * infrared

PHOTOGRAPHING THE SUBJECT

Discussion:

To take a photograph, you need a camera. Even though there are a lot of different kinds of cameras, they all use the same six elements to record images. These six basic elements are:

- * camera body
- * film
- * lens
- * aperture
- * shutter
- * viewing system

The camera body, the part you hold when taking a picture, is basically a light proof box that houses the other camera elements. The lens, shutter, aperture and viewing system are all fastened to the camera body. In addition to providing the main structure for the camera, it also protects the film from damage, dirt, and unwanted light.

The light sensitive material used to record information is called film. Without film, a camera is a useless piece of technology. When you take a picture, the light being reflected off the subject enters the camera and strikes the film for a fraction of a second. During that fraction of a second, the light changes the chemical on the surface of the film. These changes form an image on the film that represents the subject being photographed.

The film used in most cameras has three common layers, the base, emulsion, and antihalation backing. The base is a clear plastic material that supports the emulsion layer. The emulsion layer is the part of the film that records the image. This layer contains millions of light sensitive crystals supported in a gelatin substance. When these crystals are exposed to light, they permanently change. The antihalation layer absorbs the light that passes through the emulsion and the base.

The lens on a camera focuses the light entering the camera onto the film. On adjustable cameras, the lens can be moved back and forth so close objects, as well as distant ones can be photographed.

The opening that allows light into the camera is called the aperture. It controls the amount of light that can enter the camera body and strike the film.

The door that opens for a fraction of a second to allow light into the camera is called the shutter. It controls how long the light can strike the film.

The viewing system is used to aim the camera at the subject being photographed. It outlines what the camera sees and what will be recorded on film.

There are four basic types of cameras, instamatic, self-developing, adjustable, and automatic. Instamatic cameras are very simple and inexpensive. They are very easy to use because they typically do not have any adjustments. You just point the camera at the subject and push a button. They are often used to take snapshots.

Self-developing cameras use film that develops itself and are commonly used to produce photographs for driver's licences, student identification cards, and passports. Self-developing cameras are used for applications that require a picture right away.

Professional and serious photographers use very sophisticated (technologically advanced) cameras. They often need to take pictures in difficult conditions or, they want to achieve special effects when they photograph a subject. To take the best pictures possible, they often use adjustable cameras. With an adjustable camera, the photographer can control how much light strikes the film and how long the film is exposed to the light. Adjustable cameras are difficult to use and require a lot of practice before one can take pictures efficiently.

Automatic cameras are a lot like adjustable cameras. The primary difference is the adjustments are made automatically by an electronic system built into the camera. On some cameras, the automatic system can be turned off if the photographer wants to control the exposure. Automatic cameras are usually very expensive. However, with their automatic features, they can be as easy to use as instamatic cameras.

The five basic types of film are print, slide, instant, and infrared. Print film produces negatives that are used to print photographs. Depending on the type of film used, the prints can be black and white or color. Because the information is stored on a negative, the final picture can be almost any size you want. In addition, you can make as many prints of the same picture as you want.

Slide film is used to produce positives that are often called transparencies. If you hold a slide up to the light, you can see the image you photographed. Slides are viewed

with a projector. The projector shines a light through the slide and the image projects on a screen. Slides are often used when photographs need to be shown to a lot of people at once.

Instant film is used in self-developing cameras. The film does not have to be sent to the lab for processing because the chemicals needed for processing are built into the film. After the picture has been taken, the exposed film is ejected from the camera body and the recorded image slowly appears on the film, typically fully developed in about a minute. The size of the final print is limited by the size of the camera and film. If you need several prints of the same subject, you have to take several pictures. Lastly, instant film is very expensive to use.

Infrared is sensitive to a range of light which people can not see. It records an image based on the energy being radiated by the subject. The colors of the objects in the picture depends on the amount of energy being radiated by the object. Live objects tend to be colorful, while dead objects tend to be dull. In addition, the colors in the picture may not be the same as the colors we see.

All cameras share the same five basic elements. They use a camera body, film, a lens, an aperture, a shutter, and a viewing system to record images. The four basic types of cameras are instamatic, self-developing, adjustable, and automatic. Film has three main elements: an emulsion layer, a base, and an antihalation backing. Four basic types of film are print, slide, instant, and infrared.

Learning Activities:

Your photography project has to be carefully planned. You have been introduced to the technologies used to take photographs. It is now time to photograph your subject.

Taking snapshots is fun because you simply point the camera and push the button. You do not really think about what the final picture will look like when you take snapshots. You simply want to capture the moments on film. Unfortunately, snapshots rarely look like or communicate as well as professional photographs.

Photographs are carefully planned. Professional photographers have specific objectives in mind when they take photographs. To create the best possible pictures, they study the subject from a variety of angles and arrange the elements to be photographed so they are pleasing to the eye. Lastly, the photographer will carefully position the center of interest in the view finder before pushing the button.

During the following lab activities, you will be designing subjects, adjusting the camera, composing photographs, and taking photographs.

Laboratory Activity:

1. Before you can take photographs, you must prepare your camera. The film must be loaded into the camera and needed adjustments must be made. Prepare your camera according to the instructions provided by your instructor.
2. The next step is to prepare the subject you will be photographing. Start with the first panel on your story board. Review the script and study your sketch. Prepare the people and/or props needed to create an introduction for the photographic presentation. Arrange the people and/or props so they will make a nice photograph. Do not be afraid to experiment. You may need to try several arrangements before you discover the best one for the photograph.
3. Before you photograph your subject, you need to compose the picture. Composing the picture means arranging the elements in the picture so they are pleasing to the eye. The first step is to identify the center of interest or the main idea in the picture. The second step is to position the center of interest in the view finder. Even though it is called the center of interest, you do not want to locate it in the center of your picture. It is typically positioned according to the rule of thirds. To use the rule of thirds, you need to imagine your picture divided into sections like a tic-tac-toe board. The center of interest can be positioned in one of the locations where the lines cross (see Figure 2-1. Once the picture has been composed, you can take the photograph. To take the photograph, hold the camera very still and push the button.
4. Now that you know how to prepare the subject, compose the picture, and use your camera, photograph the rest of the steps in your how-to-do-it process. Use your story board as a guide. Make sure you take photographs that will communicate the ideas in your script. Do not take snapshots. Design the subject and compose your picture before you push the button. Take turns being subjects, designing subjects, and taking photographs. When you have finished your roll of film, follow the steps provided by your instructor to remove the film from your camera. Put the exposed film in a safe container until it can be processed.

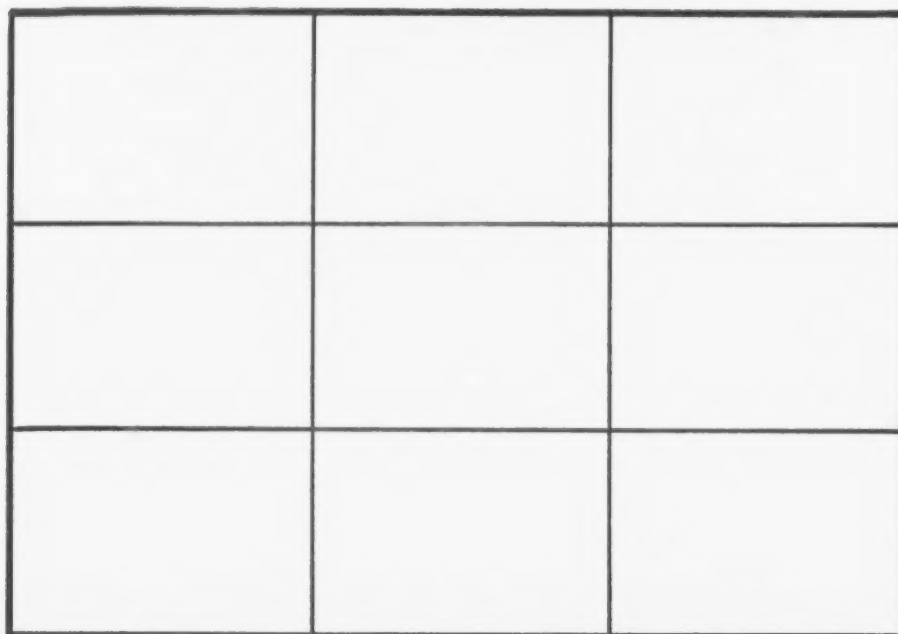
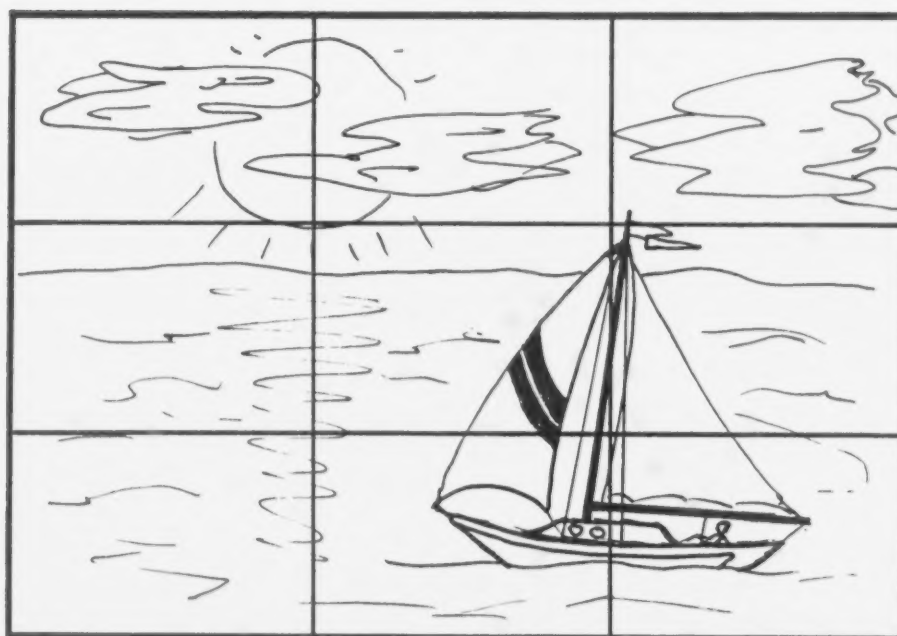


FIGURE 2-1. RULE OF THIRDS



EXPLORING INDUSTRY AND ITS TECHNOLOGIES

Unit: Exploring Photography

Lesson 3: Processing Photographs

<u>Objectives</u>	<u>Lesson Content</u>	<u>Learning Activities</u>	<u>Ref.</u>
A. Following a discussion, student will be able to: -identify the basic steps for processing print film, slide film, and instant film. -identify the four basic chemicals used to process film. -identify four basic types of image carriers.	A. Processing photographs 1. Developing print film a. developing film to make negatives b. using the negatives to expose photographic paper c. developing the photographic paper to make prints 2. Developing slide film a. developing the film to make transparencies b. mounting the transparencies into frames c. using the transparencies to expose photographic paper d. developing the photographic paper to make prints 3. Developing instant film a. activating the chemicals built into the film b. waiting for the chemicals to develop the print	A. Teacher Guided Discussion 1. Ask students if they know what happens between the time they drop the film off and they pick up their prints. Explain how film is typically sent to a commercial lab where it is processed by machine. 2. Using OT #3-1, discuss the basic steps for processing print film. 3. Using OT #3-2, discuss the basic steps for processing slide film. 4. Using OT #3-3, discuss the basic steps for processing instant film. 5. Using OT #3-4, discuss the four basic chemicals used to process film and photographic paper. 6. Using OT #3-5, introduce students to a variety of image carriers.	

4. Processing chemicals
 - a. developer (causes the image to appear)
 - b. stop bath (stops the development process)
 - c. fixer (dissolves unexposed crystals)
 - d. wash (removes processing chemicals)
5. Image Carriers
 - a. negatives
 - b. prints
 - c. slides
 - d. film strips
 - e. printing plates
 - f. stencils

B. Following a demonstration, in a lab activity, students will be able to:

- select the best photographs to communicating the ideas on their story boards.
- record their script on 3" x 5" cards or a cassette tape.
- assemble their script and photographs into a story board or slide presentation.

B. Preparing a presentation

1. Processing photographs
2. Sequencing photographs
3. Selecting the best photograph for each idea in the script.
4. Preparing the script.
 - a. making 3" x 5" card for a story board
 - b. making 3" x 5" card for a slide presentation
 - c. recording the script on cassette tape for a slide presentation
5. Assembling the presentation
 - a. using photographs and 3" x 5" cards to make a story board
 - b. using slides and a recorded script to make a slide presentation

B. Learning Activity

1. Show students an example story board and/or slide presentation
2. Explain how to organize photographs so they coincide with a story board.
3. Explain how to select the best photographs to represent the ideas in a script.
4. Demonstrate how to prepare a script for a photographic presentation. If your students are using 3" x 5" cards, demonstrate how to write a script legibly. Or if they are recording their script, demonstrate how to use a cassette recorder.
5. Demonstrate how to assemble a photographic presentation. If your students are making story boards, show students how to mount their photographs and 3" x 5" cards onto a poster board. If your students

are making a slide presentation, show them how to load their slides into a slide tray, adjust the projector, and sequence their slides with a recorded script.

6. Provide each student with HO #3-1, have them get into groups and return their processed film.
7. Have each group begin preparing their photographic presentations.
8. Circulate around the room and provide individual instruction as needed.
9. When students have finished preparing their presentations, have them store their presentation materials in a safe place.

PROCESSING PHOTOGRAPHS**Preparation Hints:**

1. Review the materials provided, duplicate HO #3-1, and prepare the transparencies needed to present this lesson.
2. During the lab activity, your students will be preparing their photographic presentations. Prior to implementing this lesson, you will need to have your students' film processed. In addition, if your students will be making story boards, you will need poster board, rubber cement, and 3" x 5" cards. If your students will be making slide presentations, you will need at least one slide projector and screen. Lastly, if your students will be recording their scripts, you will need several cassette recorders, and a cassette tape for each group.
3. Prior to implementing this lesson, consider preparing an example slide presentation and/or story board. Making a photographic presentation will help you anticipate problems and develop strategies for assuring student success.

Content Presentation Hints:

1. Show students a variety of photographic prints. Include among your examples black and white enlargements, color enlargements, 3" x 5" prints, and instant photographs.
2. Using your overhead projector, show students a series of negatives. During your discussion, you may want to have students pass around the prints that correspond with the negatives. Show students both black and white and color negatives.
3. Show students a variety of slide transparencies. Have students hold them up to the light to view the photograph scene. After students have had an opportunity to see the slides, show the slides with a projector.
4. Consider showing a film or video tape on processing photographs.

Learning Activity Hints:

1. Show students an example story board or slide presentation. Explain how the photographs and script were prepared, giving special attention to selecting and sequencing photographs and recording the script.

2. If your students are making story boards, demonstrate how to select photographs, record the script on 3" x 5" cards, layout the photographs and script in a logical sequence, and mount both the photographs and 3" x 5" cards on a poster board.
3. If your students are preparing slide presentations, demonstrate how to preview, select, and sequence slides. In addition, demonstrate how to load slides into a slide tray, advance the slide tray, and focus the projector.
4. If your students are going to record their scripts, demonstrate how to load a cassette into the tape recorder, record the information, rewind the tape, and play back the recorded information. During your demonstration, show students how to record cues that signal the presenter to advance to the next slide. In addition, explain how to rewind the tape and again record a section in the event of an error.
5. To enable students to view their slides without a slide projector, have them construct simple light tables. To illuminate slides, place a white sheet of paper on a flat surface. Locate several pieces of scrap wood around the paper. Next, place a clear sheet of acrylic plastic or glass on top of the scrap (refer to Figure 3-1). Have students put their slides on top of the clear plastic or glass. The ambient light bouncing off the white paper will adequately illuminate the slides.

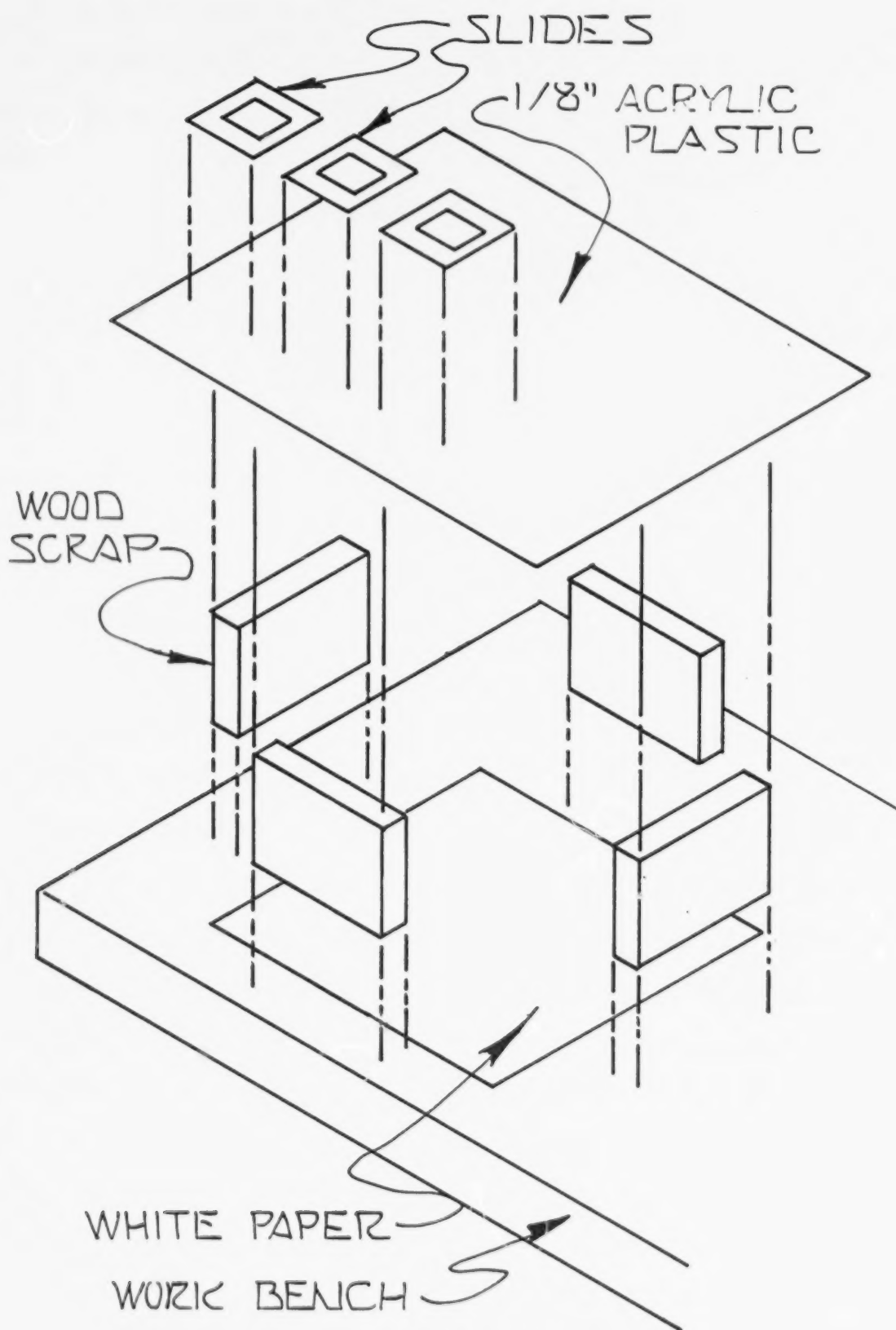
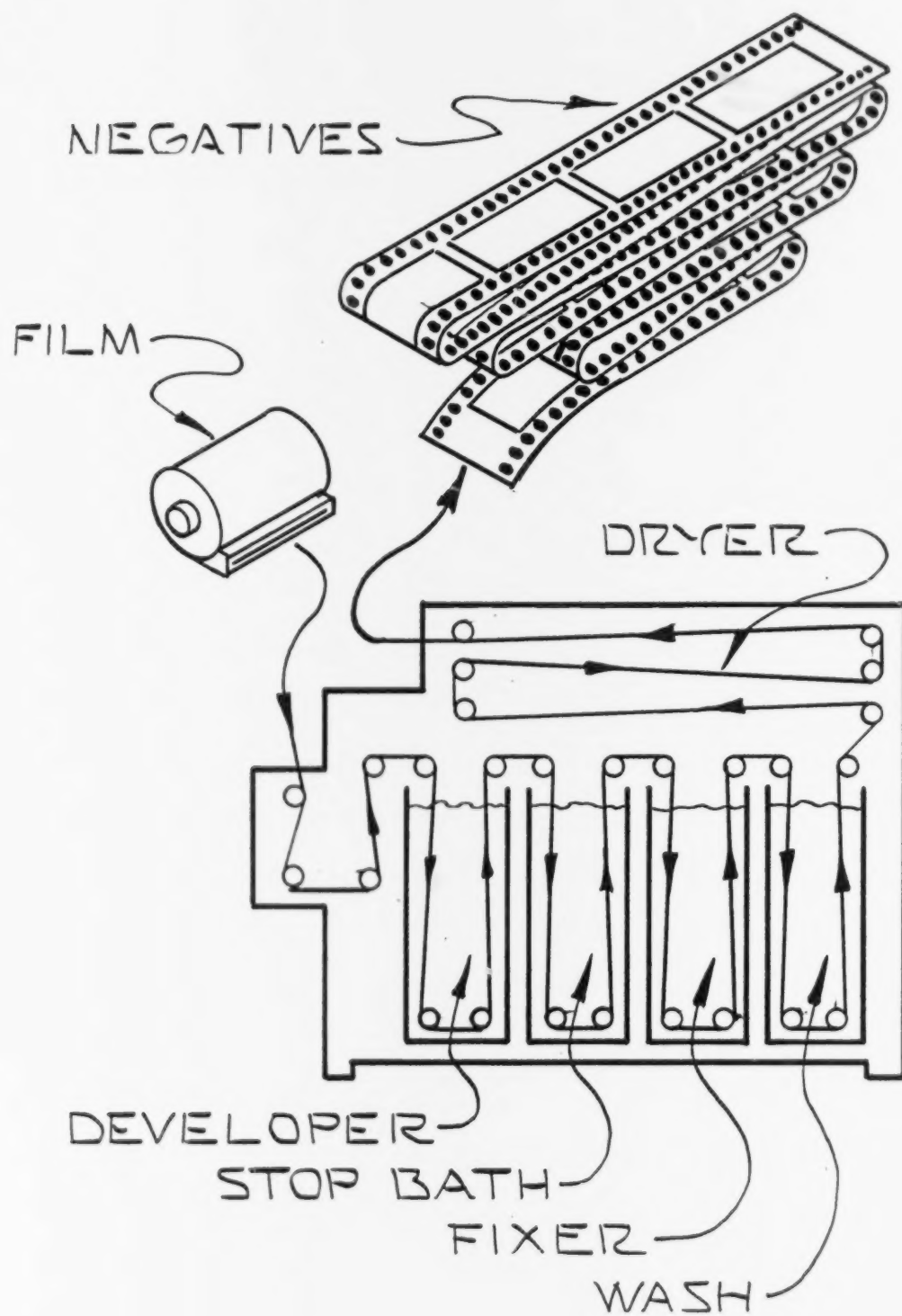
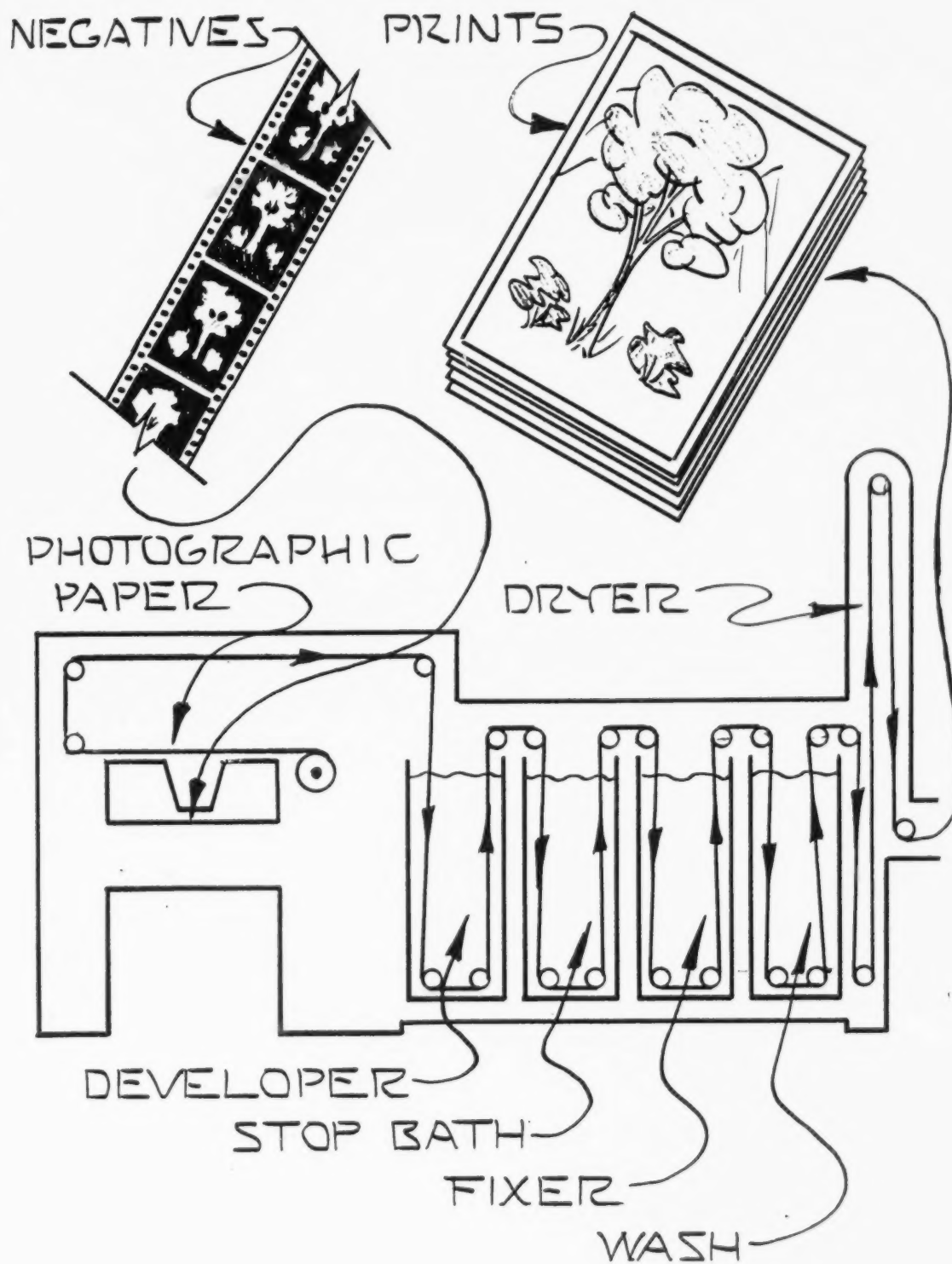
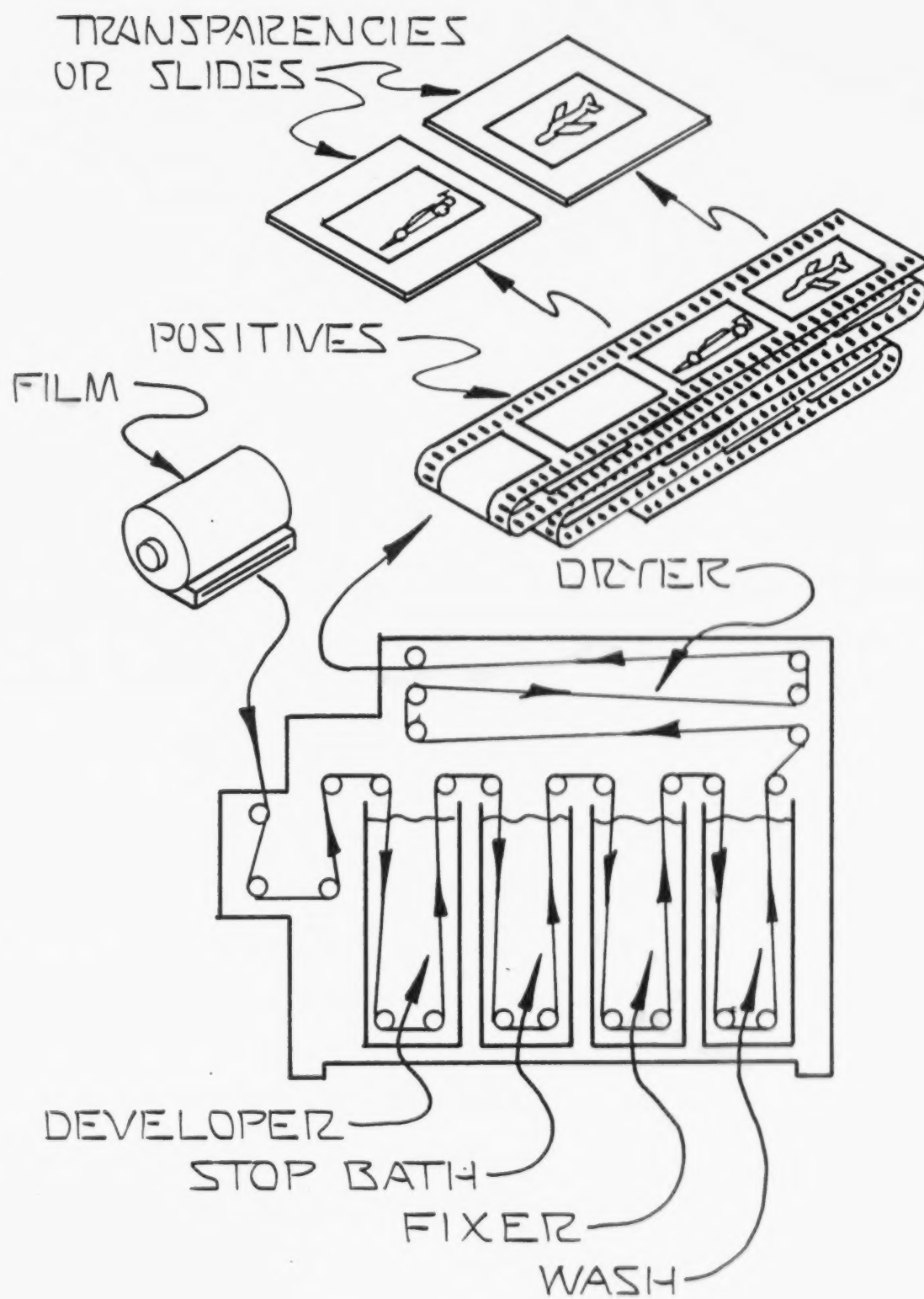
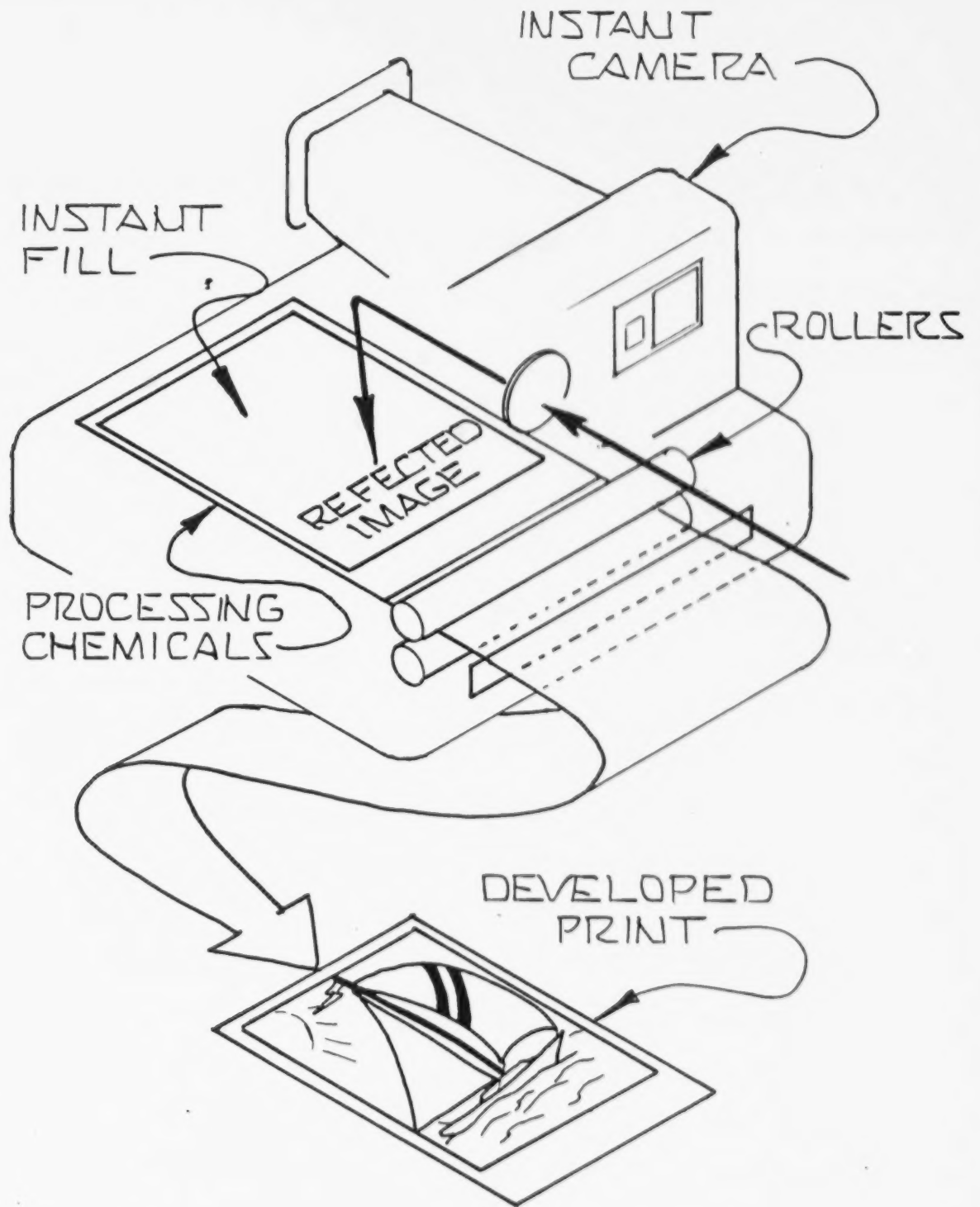


FIGURE 3-1: LIGHT TABLE









OT #3-4

PROCESSING CHEMICALS:

- * developer (causes the image to appear)
- * stop bath (stops the development process)
- * fixer (dissolves unexposed crystals)
- * wash (removes processing chemicals)

OT #3-5

IMAGE CARRIERS:

- * negatives
- * prints
- * slides
- * film strips
- * printing plates
- * stencils

PROCESSING PHOTOGRAPHS

Discussion:

When a roll of film is finished, most people take it to a local camera shop or drug store for processing and pick up a set of prints a day or two later. What happens between the time the film is dropped off and the time the prints are picked up is a mystery to most people.

In most cases, film is processed by a machine, and for the most part, the process is automated and standardized. You send your film in and you get back 3" x 5" or 5" x 7" color prints. However, when special prints need to be made for things like portraits and publications, the process is performed by technicians in a custom photo lab. For example, newspapers and magazines often do their own film processing in a darkroom. Processing their own film allows them to make prints that meet their specific needs.

When you take print film in for processing, it is sent to a commercial lab for processing. The processing has two major steps. First, the film is developed into negatives. Second, the negatives are used to make prints. When you pick up your pictures, the prints and the negatives are in the envelope. We are usually so interested in the prints, we tend to forget about the negatives.

The developing process starts with a chemical called developer. It creates a chemical reaction that causes the exposed areas on the film to change color. To stop the developing process, the film is treated with an acid solution called stop bath. Next, the film is treated with a third chemical called fixer. The fixer dissolves the unexposed crystals on the film. The film is washed in water with additives that speed the washing process and prevent spotting. Lastly, the developed film is dried.

During the development process, the images stored on the film will appear in the form of negatives. They are called negatives because everything is the opposite color it was in the photographed scene. The parts of the picture that were exposed to a lot of light are darker than the areas that receive very little light. This means the color white, which reflects a lot of light, appears black on the negative. The color black, which absorbs light, is clear on the negative.

The next step is to use the negatives to make prints. The negatives are fed into a machine. The machine shines a light through the negatives and exposes a roll of photographic paper. The photographic paper is just like film, it is sensitive to light. However, dark areas on the negative

block the light. Clear areas allow the light to travel through the negative and strike the paper. Therefore, areas that are black on the negative will appear white on the paper. Clear areas will appear black on the paper. After the paper has been exposed, it is developed in much the same way as film. It is treated with a developer, stop bath, and fixer. The paper is washed, dried, and cut into individual prints.

When slide film is developed, the result is a strip of positives or transparencies. If you hold the transparencies up to the light, everything looks just like it did when you took the photographs. Each transparency is mounted in a 2" x 2" paper or plastic frame. Together, the frame and the transparency make a slide. Slides are usually viewed with a projector. However, they can be used just like negatives to make prints on a special type of photographic paper.

In the case of instant film, the chemicals needed to process the film are sealed in the film. The film fully develops in about one minute and you have color prints. In some cases, the final print can be removed from the base that carried the chemicals.

Photographs are not always printed on photographic paper. Negatives are often used to print images onto other light sensitive materials during a manufacturing process. These materials are called image carriers. In the graphic arts industry, the image carrier can be a printing plate. Information is photographed, the film is developed, and the negative is used to expose a printing plate. After the printing plate is developed, it is mounted onto a printing press. The plate carries ink and transfers the image to paper. Sometimes photographs are printed onto a light sensitive material used to make stencils. Developed stencils can be used to print images onto things like T-shirts, coffee cups, and pop bottles. Lastly, the images for integrated circuits are reduced and printed on mask. The mask is used to etch the images into a silicon wafer.

During film processing, exposed film is treated with a variety of chemicals to make the stored image visible. When print film is processed, it becomes a strip of negatives. The negatives are used to expose photographic paper or other image carrying materials. When the paper is developed, the finished product is a photographic print. When slide film is processed, it becomes transparencies. Slide transparencies can be viewed with a projector or they can be used to make prints. Instant film is automatically processed after it has been exposed by the chemicals built into the film.

Learning Activities:

Most people do not process their own film. Even professional photographers rely heavily upon commercial laboratories for film processing. However, a film processing lab does not do all the work needed to prepare a photographic presentation. Once the film has been processed, the presentation team needs to review all the photographs, identify the best ones, sequence them with the script, and assemble the presentation. During the following lab activities, you will be using your prints or slides to prepare a photographic presentation.

1. The first step in preparing your presentation is to identify the photographs you will use. Organize the photographs so they coincide with your story board. Review the possible photographs for the first panel on the board and select the one that best communicates the idea you wish to convey. Next, select the best photograph for the second panel, and continue this process until you have chosen a photograph for each panel.
2. The next step is to prepare the script for the presentation. Your teacher will describe your options. If your presentation will be in the form of a story board, print the script for each photograph onto a 3" x 5" card. If your presentation will be in the form of a slide presentation, you could read the script from the 3" x 5" cards or you could record it on a cassette tape. If you record your script, use a clicker or bell to indicate when to go to the next slide. Make sure you speak clearly and give everyone in your group a chance to record part of the script. If you make a mistake, simply stop the tape, back up, play the tape back, and again record the bad section. Consider using music at the beginning and the end of your presentation.
3. The last step is to assemble your photographic presentation. If you are making a story board, mount your photographs and script (3" x 5" card) on poster board. Make sure your photographs are in their proper order and the script matches the photographs. If you are making a slide presentation, put your slides in a slide projector tray. You will probably need to put the slide in upside down and backwards for them to be projected correctly on the screen. You may need to experiment with the first few slides before you discover the correct method for loading slides. Next, turn the projector on, advance the tray so the first slide is displayed on the screen, and adjust the project so the picture is in focus. Put your cassette tape into the tape recorder and push the play button. When you hear the signal, advance to the next slide.

Make sure the slides match the script. When you have finished testing your slide presentation, remove the slides and number them so you can put them back in order when it is time to make your presentation. Rewind the tape and put it back in its case. Store your story board or slide/tape presentation in a safe place.

EXPLORING INDUSTRY AND ITS TECHNOLOGIES

Unit: Exploring Photography

Lesson 4: Presenting the Subject

Objectives

- A. Following a discussion, students will be able to:
- identify the characteristics of the three basic types of presentations
 - list the six basic steps in the presentation process.

Lesson Content

- A. Presenting the subject
1. Basic types of presentations
 - a. person-to-person
 - b. small group
 - c. large group
 2. Person-to-person presentations
 - a. informal and flexible
 - b. both parties exchange information
 - c. requires portable equipment
 - d. used to sell products and provide individual instruction
 3. Small group presentations
 - a. semi-formal
 - b. presenters convey information and answer questions
 - c. audience receives information and asks questions
 - d. conducted in small rooms
 - e. used to propose ideas, sell products and convey information

Learning Activities

- A. Teacher Guided Discussion
1. Discuss how presentations are a part of conducting business.
 2. Using OT #4-1, introduce students to the three basic types of presentations.
 3. Using OT #4-2, discuss the characteristics of a person-to-person presentation.
 4. Using OT #4-3, discuss the characteristics of a small group presentation.
 5. Using OT #4-4, discuss the characteristics of a large group presentation.
 6. Using OT #4-5, discuss the six basic steps in the presentation process.

Ref.

4. Large group presentations
 - a. formal
 - b. presenter conveys information
 - c. audience watches and listens
 - d. conducted in large conference rooms
 - e. requires sophisticated presentation equipment
 - f. used to convey information
5. Basic steps in the presentation process
 - a. practice the presentation
 - b. promote the presentation
 - c. prepare the presentation
 - d. make the presentation
 - e. clean up
 - f. evaluate and modify the presentation

B. Following a demonstration, in a lab activity, students will be able to:

- prepare, present, and clean up a photographic presentation.
- complete an evaluation form, critiquing presentation photographs, scripts, and presenters.

B. Making the presentation

1. Assign presentation tasks to team members
2. Rehearse the presentation
3. Set up the presentation
4. Make the presentation
5. Evaluate and modify the presentation

B. Learning Activity

1. Provide students HO #4-1 and discuss how to prepare and present their presentations.
2. Introduce students to the peer evaluation form. Explain how to evaluate presentations and complete the form.
3. Have students get into their groups and begin preparing their presentations.
4. Circulate around the room and provide individual instruction as needed.
5. After students have had an opportunity to prepare and rehearse their presentations, assemble the class and have each group make their presentation.
6. Collect and evaluate presentation materials and peer evaluation forms. Provide students with feedback regarding their presentations as soon as possible.

PRESENTING THE SUBJECT**Preparation Hints:**

1. Review the materials provided, duplicate HO #4-1, and prepare the transparencies needed to present this lesson.
2. Consider inviting administrators, parents, guidance counselors and teachers to your students' photographic presentations. For best results, have your students make and present the invitations.
3. If your students are making slide presentations, you will need to provide a slide projector and screen. In addition, you may want to provide more than one slide tray to reduce the amount of setup time between presentations. Lastly, if your students recorded their scripts, you will need to provide a cassette player.
4. If your students' presentations are in the form of a story board, you may want to provide some sort of easel. Having an easel to support the story board will allow your students to concentrate on making their presentations. Ask the art department if you can borrow an easel if you do not have time to make one.
5. If your students' presentations are in the form of a story board, consider using the school's videotape equipment to record their presentations. After the students have made their presentations, they can play the tape back and evaluate their own photographic presentations.

Content Presentation Hints:

1. Use specific examples to discuss the three basic types of presentations. For example, person-to-person presentations could be discussed in the context of a door-to-door salesperson using photographs to sell vacuum cleaners, encyclopedias, cosmetics, or kitchen products. Small group presentations could be discussed in the context of a guest speaker coming to your class and showing slides. Lastly, large group presentations could be discussed in the context of a convention being held in your community.
2. When discussing the skills needed to make a quality presentation, try to reinforce the concepts taught in your language arts department.

3. Consider inviting a guest speaker from industry to discuss how they conduct presentations in the course of doing business.

Learning Activity Hints:

1. Allow students to rearrange classroom furniture to best accomodate their presentations. If your technology education facility is not conducive to making formal presentations, consider using the cafeteria, an empty classroom, or the school auditorium.
2. Ask students to complete a peer evaluation form after each presentation. Use the peer evaluations in conjunction with your own evaluation to determine a grade for each presentation.
3. When your students have completed their presentations, consider displaying their story boards or slide presentations in a location where the rest of the school community can see the results of your students' communication activities.

OT #4-1

BASIC TYPES OF PRESENTATIONS:

- * person-to-person
- * small group
- * large group

OT #4-2

PERSON-TO-PERSON PRESENTATIONS:

- * informal and flexible
- * both parties exchange information
- * requires portable equipment
- * used to sell products and provide individual instruction

OT #4-3

SMALL GROUP PRESENTATIONS:

- * semi-formal
- * presenters convey information and answer questions
- * audience receives information and asks questions
- * conducted in small rooms
- * used to propose ideas, sell products and convey information

OT #4-4

LARGE GROUP PRESENTATIONS:

- * formal
- * presenter conveys information
- * audience watches and listens
- * conducted in large conference rooms
- * requires sophisticated presentation equipment
- * used to convey information

OT #4-5

BASIC STEPS IN PRESENTATION PROCESS:

- * practice the presentation
- * promote the presentation
- * prepare the presentation
- * make the presentation
- * clean up
- * evaluate and modify the presentation

PRESENTING PHOTOGRAPHS

Discussion:

Formal presentations are an important part of conducting business in industry. They are used for things like proposing new ideas, selling products, educating employees, conveying information, and keeping the general public informed. Because "a picture is worth a thousand words," the people who plan and make presentations rely heavily on photographs.

There are several different types of presentations. They are as follows:

- * person-to-person
- * small group
- * large group

Person-to-person presentations tend to be informal and flexible since both parties participate in the exchange of information. They must allow the presenter to skip over or dwell on specific information according to the needs of the receiver. This type of presentation can be in the form of a story board or a slide presentation. A slide presentation to one person is often conducted with a portable desk-top projector with a built in screen. Person-to-person presentations are typically simple and to the point. They are often used to sell products and provide individualized training.

Small group presentations are often semiformal. The presenter's role is to convey information and answer questions. The audience's role is to receive the information and ask questions. Presentations of this kind are typically given in small conference rooms or classrooms. Story boards can be used when there are only a few people in the audience. Slide presentations using projectors and screens are more appropriate for larger groups. This type of presentation can be used to propose ideas, sell a product, or convey information.

Large group presentations are very formal. Because the group is large, the audience can not participate in the presentation. Therefore, most large group presentations are one-way. The presenter presents information while the members of the audience watch and listen. This type of presentation is typically conducted in a large conference room, banquet hall, theater, or auditorium. This type of presentation often requires sophisticated presentation equipment that might include large screens, multiple projectors, and amplified sound systems. The primary goal of a large group presentation is to inform the audience.

Professional presenters follow a basic series of steps when they make a presentation. They are as follows:

- * practice the presentation
- * promote the presentation
- * prepare the presentation
- * make the presentation
- * clean-up
- * evaluate and modify the presentation

The first and possibly most important step in the presentation process is to practice the presentation. Professional presenters will often make their presentation to friends several times before they present it to the real audience. When the rehearsal is over, they ask their friends for ideas to make the presentation better.

The next step is to announce and promote the presentation. The best presentation in the world is useless if no one shows up to see it. Therefore, it is important to make sure your target audience knows you will be making the presentation. Salespeople often call their customers before they make a sales presentation. In industry, memos are often used to announce a presentation. Large conferences typically include a program that lists presentation topics, times, and locations. Sometimes, flyers are printed and mailed to announce important presentations.

Preparing the actual presentation can include things like setting up the projector and screen, arranging chairs, and checking the lighting. In addition, developing a positive attitude and dressing appropriately are also important parts of preparing for a presentation.

The ultimate step is actually making the presentation. This is the step for which presenters plan and work so hard. Most of the time, if the planning is good, the presentation will be also be good. To make a good presentation, you need to be able to do more than take good pictures. You need to speak clearly, make eye contact with your audience, and use simple gestures.

When it is all over, the presenter needs to clean up. Clean up can be as important as the setup, especially if the presentation needs to be given again in the near future. A poor clean up can create more work the next time the presentation needs to be made.

Lastly, after the presentation has been made, it needs to be evaluated. Problems need to be identified and improvements need to be made. Even though there is always room for improvement, it is important not to make big changes in a good presentation.

Photographs can be powerful communication tools when making a presentation. There are three basic types of presentations, person-to-person, small group, and large group presentations. The basic process for making a presentation includes practicing, promoting, preparing, presenting, cleaning up, evaluating, and modifying.

Learning Activities:

Your group has worked hard to prepare photographs and a script. Finally, it is now time to give your how-to-do-it presentation.

In your group, decide who is going to perform certain tasks during your presentation. For example, who is going to set up the projector, who is going to introduce the presentation, who is going to turn the lights on and off, who is going to run the projector, and who is going to answer questions.

If your presentation is in the form of a story board, consider dividing your presentation into sections. Have each member of your team present one section of the story board. For example, if your team has three members and your story board has 12 parts (photographs and script card), each member could present four parts. Another option would be to have one member introduce the presentation, another member give the presentation, and another member answer questions.

Once you have assigned all the tasks, conduct a rehearsal. If you discover new tasks that have to be performed, assign them to members of the team. During your rehearsal, check the equipment to make sure it is working properly. During your introduction, make sure the presentation topic and the members of the presentation team are introduced. Make sure your photographs are in the proper order. Take turns asking and answering questions.

When it is your turn to give your presentation, stand up straight, speak clearly, and make eye contact with your audience. When your presentation is over, remove and pack the materials. While you are cleaning up, your peers will evaluate your presentation. Your teacher will give you a summary of the evaluations. Use the summary to improve your presentation so it will be even better the next time you need to give it. Good luck.

PHOTOGRAPHIC PRESENTATION PEER EVALUATION FORM

Presentation Topic: _____

Team Members: _____

Directions:

After each product presentation, rate the presentation elements listed on the left, on a scale of one to five.

1 very good 2 poor 3 average 4 good 5 excellent

The photographs:

were in a logical order	1	2	3	4	5
communicated the ideas in the script	1	2	3	4	5
were well composed (pleasing to the eye)	1	2	3	4	5

The script:

followed a step-by-step process	1	2	3	4	5
provided important information	1	2	3	4	5

The presenters:

introduced the topic	1	2	3	4	5
introduced themselves	1	2	3	4	5
spoke clearly	1	2	3	4	5
made eye contact	1	2	3	4	5
were able to answer questions	1	2	3	4	5
conducted their presentation smoothly	1	2	3	4	5

EXPLORING INDUSTRY AND ITS TECHNOLOGIES

Unit: Exploring Photography

Lesson 5: Evaluation

Objectives	Lesson Content	Learning Activities	Ref.
A. Following a review, students will be able to complete given concept statements regarding photography with a minimum of 70% accuracy.	A. Review 1. Introduction to photography a. A definition for photography b. Advantages of photography c. Applications for photography 2. Photographing the subject a. Basic elements of a camera b. Basic types of cameras c. Basic elements of film d. Basic types of film 3. Processing photographs a. Developing print film b. Developing slide film c. Developing instant film d. Processing chemicals e. Image carriers 4. Presenting the subjects a. Basic types of presentations b. The basic presentation process	A. Teacher Guided Review 1. Review the major concepts explored in this unit. 2. Provide students with an opportunity to ask questions before taking the test. 3. Provide students with HO #5-1 and make sure each student has a pen or pencil. 4. Explain the directions for the test. 5. Have the students read the test and answer the questions. 6. Collect the test and grade your students' performance. 7. Provide students with feedback regarding their test performance as soon as possible.	

EXPLORING PHOTOGRAPHY
Unit Test

Directions: Read each statement carefully. Circle the letter of the answer you think best answers the question.

1. Photography is _____.
 - A. drawing pictures
 - B. storing information on a light sensitive material
 - C. storing information on videotape
 - D. printing an image on paper
2. The part of a camera that is basically a light proof box is the _____.
 - A. the shutter
 - B. aperature
 - C. camera body
 - D. film
3. The basic part of a camera that controls the amount of light reaching the film by opening and closing is the _____.
 - A. viewing system
 - B. shutter
 - C. lens
 - D. film
4. The basic part of the camera that gathers and focuses light onto the film is the _____.
 - A. camera body
 - B. lens
 - C. shutter
 - D. viewing system
5. Which of the following basic types of cameras uses instant film?
 - A. instamatic
 - B. self-developing
 - C. adjustable
 - D. automatic

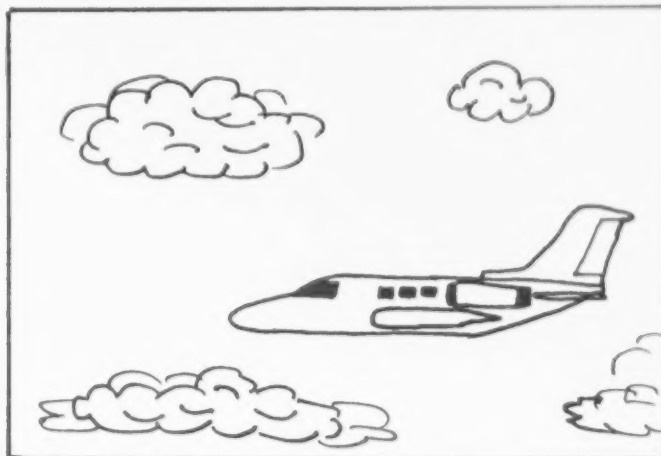
6. Professional photographers typically use a ____ camera.
- A. instamatic
 - B. self-developing
 - C. adjustable
 - D. automatic
7. Which of the following types of film does not need to be sent to a lab for processing?
- A. print
 - B. slide
 - C. instant
 - D. infrared
8. Which of the following types of films is used to make transparencies?
- A. print
 - B. slide
 - C. instant
 - D. infrared
9. Which of the following types of film is used to make black and white or color photographs?
- A. print
 - B. slide
 - C. instant
 - D. infrared
10. Photographic film is made up of several different layers. The layer that contains the light sensitive crystals that record the image is called the ____ layer.
- A. base
 - B. emulsion
 - C. antihalation
 - D. adhesive
11. Scientists often use photography to ____.
- A. to make sales presentations
 - B. to make printing plates for lithography presses
 - C. make artistic statements
 - D. study moving objects

12. Which of the following types of film produces a negative that can be used to make prints?
- A. instant film
 - B. slide film
 - C. print film
 - D. all the above
13. The chemical used to cause the recorded image to appear on film is called ____.
- A. developer
 - B. stop bath
 - C. fixer
 - D. wash
14. The processing chemical used to dissolve unexposed crystals is called ____.
- A. developer
 - B. stop bath
 - C. fixer
 - D. wash
15. Which of the following is an example of an image carrier?
- A. printing plate
 - B. film strips
 - C. slides
 - D. all the above
16. Which of the following image carriers shows everything in the opposite color it was in the photographed scene?
- A. transparencies
 - B. negatives
 - C. positives
 - D. prints
17. A real estate salesperson showing a prospective customer pictures of houses that are for sale is an example of a ____.
- A. person-to-person presentation
 - B. small group presentation
 - C. large group presentation
 - D. training presentation

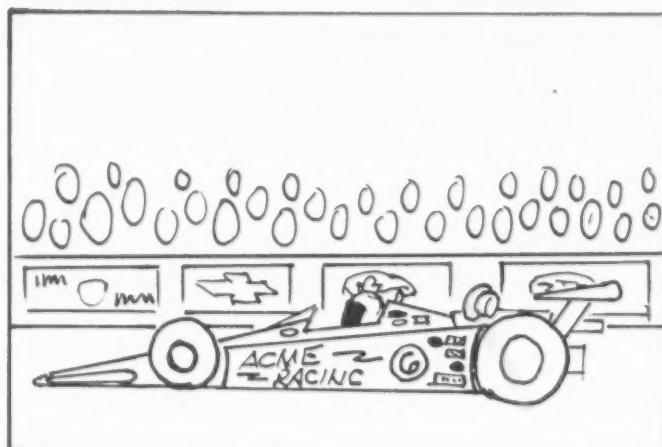
18. A guest speaker showing slides to your class would be an example of a _____.
- A. person-to-person presentation
 - B. small group presentation
 - C. large group presentation
 - D. sales presentation
19. Which of the following lists the basic steps for making a presentation in their correct order?
- A. Prepare, promote, practice, present, clean up, and evaluate
 - B. Present, prepare, practice, promote, clean up, and evaluate
 - C. Evaluate, clean up, present, prepare, promote, and practice
 - D. Practice, promote, prepare, present, clean up, and evaluate

20. Which of the following illustrations does not follow the rule of thirds?

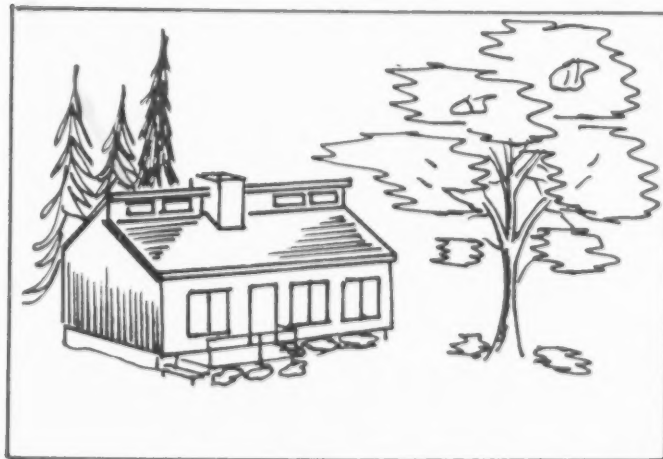
A.



B.



C.



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